



79
6

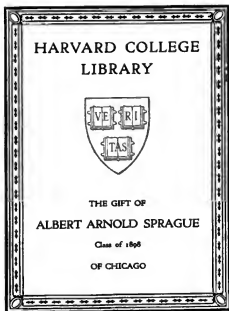
*The MAKING
OF AMERICA*

Editorial Edition
limited to one thousand

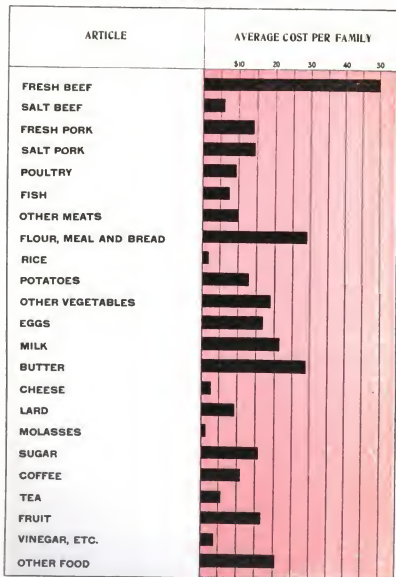
The making of America

Robert Marion La Follette,
William Matthews Handy, Charles Higgins

MS 2012.15



**AVERAGE COST PER FAMILY
OF CERTAIN ARTICLES OF FOOD
FROM REPORTS OF 2,567 AMERICAN FAMILIES**



d 1-2

798
6



The MAKING OF AMERICA

Editorial Edition
limited to one thousand copies
of which this is No.

Robert Marion La Follette

Editor-in-Chief

William M. Handy

Charles Higgins

Managing Editors

VOL. X

Public Welfare

The Making of America Co.

Chicago

17.10.1881C



Albert S. Logue

Copyright 1905 by John D. Morris & Company
Copyright 1906 by The Making of America Co.

CONTENTS

VOLUME X.

PUBLIC WELFARE.

<u>Charity,—Theory and Practice.</u>	
<u>BY CHARLES RICHMOND HENDERSON.....</u>	<u>1</u>
<u>The Expansion of Organized Charity.</u>	
<u>BY ALFRED O. CROZIER</u>	<u>18</u>
<u>Benevolent Institutions.</u>	
<u>BY JOHN KOREN.....</u>	<u>22</u>
<u>Science in Philanthropy.</u>	
<u>BY CHARLES RICHMOND HENDERSON.....</u>	<u>40</u>
<u>Educational Philanthropy as an Investment.</u>	
<u>BY ROBERT A. WOODS</u>	<u>50</u>
<u>Jewish Charities.</u>	
<u>BY LEE K. FRANKEL.....</u>	<u>57</u>
<u>Emergency Relief in Great Disasters.</u>	
<u>BY EDWARD T. DEVINE.....</u>	<u>77</u>
<u>The Building of Hospitals.</u>	
<u>BY HOLLIS W. FIELD</u>	<u>88</u>
<u>Institutions for the Blind.</u>	
<u>BY G. L. SMEAD</u>	<u>92</u>
<u>Provision for the Insane.</u>	
<u>BY WILLIAM M. EDWARDS</u>	<u>104</u>
<u>Immigration and the Public Health.</u>	
<u>BY ALLAN McLAUGHLIN</u>	<u>119</u>
<u>City Life, Crime and Poverty.</u>	
<u>BY JOHN R. COMMONS</u>	<u>128</u>
<u>Poor Relief in the United States.</u>	
<u>BY EMIL MUNSTERBERG.....</u>	<u>139</u>

IV

CONTENTS

<u>The Drink Problem.</u>	
<u>By THOMAS DAVIDSON CROTHERS.....</u>	176
<u>Tenement House Regulation.</u>	
<u>By ROBERT W. DE FOREST.....</u>	193
<u>Race Suicide in the United States.</u>	
<u>By WALTER F. WILCOX.....</u>	207
<u>American Women in Philanthropy.</u>	
<u>By MAY WILKINSON MOUNT.....</u>	218
<u>The Fire Fighter of To-day.</u>	
<u>By JOHN CAMPION.....</u>	222
<u>Building and Loan Associations Make Both Men and Cities.</u>	
<u>By HERBERT FRANCIS DE BOWER.....</u>	226
<u>Fraternal Insurance in the United States.</u>	
<u>By B. H. MEYER.....</u>	232
<u>Growth of Secret Societies.</u>	
<u>By WILLIAM WALLACE PHELPS.....</u>	249
<u>Principles of Reform in Penal Law.</u>	
<u>By CHARLTON T. LEWIS.....</u>	254
<u>Evolution in Reformatory Methods.</u>	
<u>By LYMAN D. DRAKE.....</u>	262
<u>The Race Problem at the South.</u>	
<u>By HILARY A. HERBERT.....</u>	270
<u>The Development of Public Libraries.</u>	
<u>By CHARLES AMMI CUTTER.....</u>	275
<u>The Adulteration of Food and Medicine.</u>	
<u>By HAMILTON P. DUFFIELD.....</u>	288
<u>Corruption in Public Life.</u>	
<u>By CHARLES J. BONAPARTE.....</u>	301
<u>The Reign of Law.</u>	
<u>By JOSEPH WINGATE FOLK.....</u>	307
<u>GENERAL INDEX.....</u>	317

CHARITY—THEORY AND PRACTICE.

BY CHARLES RICHMOND HENDERSON.

[Charles Richmond Henderson, associate professor of sociology in the University of Chicago, is one of the world's foremost authorities on scientific philanthropy; he is a graduate of the old University of Chicago and of the University of Leipsic; he has traveled extensively in Europe and America investigating applied philanthropy more especially in regard to prison conditions; he is probably the best known American writer on philanthropic subjects.]

Copyright 1903 by American Academy of Political and Social Science

American farmers have long known the importance of importing the finest breeds of horses and cattle, of crossing strains and exchanging seeds. We are at least beginning to learn the value of cross fertilization in the realm of social practice. The only reliable basis for a law or method of administration, or for a social experiment, is knowledge of the experience of the civilized world. The conditions of modern life forbid provincialism in thinking and isolation of workers. The so called self made man who boasts of being practical is of all men frequently the most visionary schemer, because he lives on an island without communication with the continent and gives his petty vision validity for mankind. His ideas become dwarfs, like the hens described by Hawthorne to illustrate the danger of in-and-in breeding. Dr. Lester F. Ward uses the happy epithet, "the illusion of the near," to designate the mental myopia which comes from the habit of neglecting large general views of world movements. One who, climbing a mountain, loses himself in the tangles of brush and the gulches of the seamed flank, does not enjoy the beauty of the purple distance nor discover the order of the extended range. The central purpose of this article is to indicate the direction in which the apparently impulsive, emotional and chaotic efforts of philanthropy are tending, the outlines of a system of orderly approach to problems of management, and some of the unsettled problems which confront and halt us at the frontier of present experience.

Under the rule of thumb and the régime of merely practical people the propagation of the feeble minded stock went on unchecked, with its accumulation of miseries. It was when

men began to mix theory with practice, and bring to bear the lessons of biology on the conduct of poor relief, that actual progress was made toward a rational, humane and effective policy of segregation of the unfit. It was a philosophical state secretary, a companion of men of science, who crystallized the working hypothesis of segregation into this statement:

"By reason of years of study, we are coming to know what measures are preventive. These are practical and economical. Had they been known and could they have been adopted a generation ago, we should have a much smaller number of dependents to care for now. If, now that we know them, we utilize these preventive measures, there will be a great decrease of dependents in the next generation."

The last century ripened the products of growths which root themselves in the period anterior to the Reformation. Poor relief, in the history of Christian peoples, has assumed three types, in response to changing social conditions: the voluntary and congregational charity of the early churches, before Constantine; the medieval ecclesiastical methods of parishes, bishops, monasteries, orders and institutions; and the modern laic and political poor relief, supported by taxation and supplemented by individual and voluntary charity. The peoples of northern Europe, largely Teutonic and Protestant, have carried the system of public relief much farther than the romance countries of southern Europe; but France and Italy have embarked upon the same voyage, urged by the same forces. In Germany the national feeling which created a central legislature at Berlin, a supreme court at Leipsic, and an imperial army and navy, could not brook the spectacle of a suffering citizen without right to relief, in whatever state or commune he might fall into destitution, or, neglected by chance individual charity, be driven to steal. The imperial poor law and the workingmen's insurance measures are expressions of a civic conscience as well as of a consciousness of common interest. The creative thought does not seem to be merely to secure better administration, but to fulfill a national obligation. So long as there is no legal system, with a basis in universal taxation, multitudes of the destitute must be exposed to all the uncertain chances of liberality or neglect which

characterize voluntary charity. The heroic fight of Thomas Chalmers against the introduction of the outdoor relief system of England into Scotland was lost, and the principle of individualization by small districts, which he demonstrated by action, has never yet taken deep root in Great Britain, although it has triumphed in the German Elberfeld system, and struggles for life and growth in the charity organization society on both sides of the Atlantic. On the other hand, the obligation of the whole community to all its destitute members, which is the fundamental principle of poor laws, seems destined to be accepted by all the states of Christendom. The reaction against it in American cities is probably due to the general despair of securing honest and competent administration under the spoils system of municipal government; for outside the cities the wisdom of a poor law for outdoor relief is practically unquestioned. France, which long persisted in refusal to extend outdoor relief beyond the urgent cases of insanity and helpless infancy, has in recent years greatly enlarged its scope. The law of 1811 was modified in 1893 by placing medical relief under public administration. The next stage of development would seem inevitable, pensions for indigent aged people at cost of tax payers, and definite provision for all who are indigent and helpless.

Italy, united politically into one kingdom, has patiently sought to bring some kind of order out of the chaos of medieval relief methods which filled her cities with beggars, and yet left the most miserable paupers of backward communes to starve. The endowed charities have been gradually brought under systematic control, dead branches have been pruned, hurtful and absurd methods have been corrected, and the foundation has been laid for a rational and modern relief system.

But if the state enlarges its activities on behalf of the destitute, it follows that there must be central regulation of the conditions under which relief may be granted. The state must lay the burden on local political divisions for direct administration and support. This involves, first of all, more stringent settlement laws. The movement of population from state to state and even from continent to continent is now so

easy and cheap, and the inducement for forwarding undesirable citizens is so strong, that one community may find itself overwhelmed with a burden which rightly should be shared. Cities attract paupers, and country relieving officers are prone to furnish free transportation to places where mercy is blind, people too busy to investigate, and where questions are not asked except by inveterate organizationists, that tribe so hard of heart. One form of barrier is the immigration law against importation of European defectives and Chinese laborers with a pauper standard of life. Even Russia has been compelled to resort to settlement laws to prevent congestion of pauperism in centers of population. Germany, since 1870, under a unified imperial code, has reached a fairly satisfactory solution. In the United States, which has felt so rich that it could endure almost any abuse, the evils of unregulated migration of paupers are becoming so manifest as to call for more efficient measures. Massachusetts and New York may be taken as examples of old communities with inherited laws and traditions of ancient English customs, and with a long experience of their own, and these have developed complicated settlement regulations, though of different types. The ideas of the eastern states travel slowly westward, as cities grow and the pressure of pauperism is more sensibly felt. So long as the hardships of the plain and of a pioneer life held feeble folk at a distance, the states of the west were not impelled to fix severe conditions of settlement. But when Atlantic cities shipped the children of immigrants, even of paupers and criminals, into their villages, instead of sending them back to Europe, or caring for them at home, the states, one after another, passed laws requiring at least security for their selection and supervision. So long as there was free public land a large population was desired, and quality was not so much a question. Malaria and revolvers, in certain districts, have represented natural and artificial selection, and settlement laws are gradually added to help nature. While the laws of settlement in Colorado are still quite mild, the invasion of consumptives has led to a discussion which will doubtless result in more adequate protection.

The more complete organization of civil relief does not

imply the suppression of private and ecclesiastical benevolence, but only a better understanding and division of labor, a demarcation of spheres of influence and activity. The German Evangelical Inner mission, for example, the rapid multiplication of English philanthropic enterprises, and the devotion of means and personal service in America, show that a public system has strict limitations; and that the same civic conscience which supports a poor rate also calls for personal and associated efforts too delicate for the rude and cumbrous machinery of the state. The same tendencies are at work in Scandinavia, Holland, Scotland and elsewhere. Many of these agencies are not under ecclesiastical control, as the Red Cross society; but the church has been awakened to take to heart its ancient task of ministry to the poor.

It is true that these two systems have grown up somewhat independent of each other, and sometimes there is conflict or competition between them. Even German municipal councilors may be heard to complain that the church parishes, especially those with large funds, do not coöperate with each other or with the city, in an harmonious plan of helping the poor. In the United States, where the horror of bureaucracy is so strong, we have reconciled ourselves to the tyranny and corruption of bossism and spoils, evils unknown in German administration of poor relief. In many places our efforts to secure information to which every taxpayer has a moral and legal right, are often treated with that insolence which is evidence that investigation is both hated and feared. In many places no statistics of value are kept, and original records are burned at frequent intervals on the plea that unfortunate citizens in need of help should not have their names kept in a public record. In German cities the feelings of dependents are more respected than here, and the administration is practically effective through voluntary and unpaid visitors, carefully selected by the authorities.

The Charity Organization society is therefore called for, not only in Great Britain and America, but even in countries like Germany, where its principles are actually embodied in the public system. Indeed, the organization movement is as wide as civilization. It is an effort to synthesize the sepa-

rately evolved agencies of state, church and private associations.

Another illustration of the tendency to federation of philanthropy, to form trusts of charity, may be taken from a recent organization of child saving societies of the middle west. The belief that the best place for a normal dependent child is not in a large cold storage establishment, but in a warm and real family home, has everywhere taken deep root. As the number of homeless children increases with population, and as neighborhood ties are broken up by the incidents of a shifting urban life, the necessity of organized effort to find new homes, select them carefully and supervise them thoroughly, has become generally apparent. Even where the state, as in Michigan, Wisconsin, and Minnesota, has provided a temporary school and placing-out agency, with admirable administration, popular sentiment favors the support of voluntary associations, and in most states this form of help is alone in the field. Independent in origin, associations of the same type have sprung up in the vast plain drained by the Mississippi river. Some of these societies were admirably managed from their experimental beginnings, while others were conducted by persons who had inadequate conceptions of the responsibilities they were assuming. Occasionally downright dishonesty has been discovered. There are still very large areas, especially in the south, in which many little waifs are thrust into poorhouses and even jails, and are without organized means of placing out the helpless and homeless. The necessity for federation, in order to correct abuses, guide action and enlarge the field of labor, became manifest to many persons, and these formed the National Children's Home society on the basis of a former society. The ideals of this organization have by no means been reached, but already the semi-annual meetings of executive officers for discussion, criticism, personal acquaintance and propagandism have clarified thought, brought essential regulative principles into light and clear expression, corrected abuses, prevented unwise enterprises, adjusted differences, trained new workers, and extended agencies into destitute fields. A table of statistics published by this society May 31, 1902, showed the results of work done

in twenty four states: Total number of children cared for from beginning, 18,528; children now under supervision, 10,704; number of children placed in families for the first time, during the year reported, 1,900; expenditures, \$193,768; value of lands, buildings and funds, \$151,070. The figures show how large a work can be done with little dead capital.

As persons of various occupations, trades, arts and professions federate and confer together with advantage to themselves and the public, inspire professional spirit, improve methods, so charitable workers and students are forming associations in local, state, national and even international societies, for kindred purposes.

This consideration brings us to a topic over which discussion grows hot in the United States, the problem of state supervision and control of public and even private philanthropy and relief. It is easily shown that we have here one phase of a world movement. The agitation, excitement and even the irritation of the debate will conduct us toward a sober and profitable consideration of the experience of civilized nations, especially of those where the science of administration has been more fully developed than with us.

Some illustration from the older countries may serve to light the way to secure ground. In a study by the present writer, the documents relating to central administration of penal and correctional establishments were collected and made accessible to readers of English; and there it will be shown with considerable detail that in establishments of this class the necessity for central control has been everywhere legally recognized, except in the United States. In Germany alone there is no such system of public supervision and reports in addition to outdoor relief, except in Bavaria. This defect seems due to the fact that the municipal relief system has reached a high degree of perfection, is based on a common poor law, and is so independent of voluntary charity that no serious demand is made for state supervision of administration. It is admitted, however, by high authorities, that not only rural relief but even urban administration would often be improved by the requirement of inspection and uniform reports of statistics. Such inspection and even control is carried very far

in Great Britain. The bitter and costly experience under the tax methods previous to 1834, taught the English people a lesson which they have not yet forgotten. The local authorities have, indeed, much responsibility and freedom of initiative, but over England and Wales the local government board exercises control under a general law, and a similar system is organized both in Scotland and Ireland. For the inspection of care of children and families women are frequently appointed, and with excellent results.

In Austria, state commissions have inspectors of local relief officers and they secure uniform, impartial, and efficient administration of the law. Local officials there, as everywhere, as a rule, lack training, reliability and accuracy, as compared with central officers, but they have the advantage of intimate knowledge of the conditions in their own neighborhoods. By combining central supervision with local responsibility for details, the best results are obtained. In Switzerland, canton of Berne, under a recent law, a corps of inspectors keeps the central board of supervision in touch with district relieving officers. In Belgium a commission reports in terms of enthusiasm on the results of state supervision, and calls the members of the staff of inspectors apostles of beneficence. France, true to its traditions of central control, extends its state administration as far as government relief extends. These indications of tendencies of European countries bring to light certain principles which seem to lie at the basis of the discussion in which our people are now engaged.

Those who imagine that the most perfectly disciplined administrators in the world permit themselves to execute law exempt from the influence of competent citizens would do well to study the numerous organizations which help to bring government into touch with daily life. The German imperial and state governments have long since developed various devices for the representation of interests and of expert knowledge, both in the preparation of legislation and the execution of laws, as in relation to colonies, emigration, boards of trade, insurance, public health, welfare of workingmen, postal service, agriculture, railroads, and stock raising.

If, under the most scientific systems of administration,

both special commercial and public interests require representation and hearing, how much more true is this of wards of charity, the insane, the imbecile, the homeless child, who are incompetent to plead for themselves.

The direct and measurable effects of simple supervision and publicity, without legal control, are seen in the statistics of outdoor relief by the township trustees of Indiana. There the local officials are required to send to the state board of charities a report of every family which receives aid. These reports are tabulated, set in contrast and published. The cost to the public has been diminished, the poorhouses have not been crowded, and the more careful scrutiny of individual cases has unquestionably led to an improvement of their moral habits on which permanent welfare depends.

First of all we need to make clear to ourselves the distinction between state control of direct administration and organization of public opinion as to policies and results. In the controversy much confusion has been introduced into papers and hot speeches by failure to note the difference between these aims of constitutional and popular governments. Dr. F. H. Wines brought out the point at Detroit and it ought to be insisted on to the end. Public control of administration must be in the hands of salaried experts; agencies of public opinion should not be paid, unless for actual expenses, and they need not be professionals. In our judicial experience we recognize the difference between the judge and the ordinary jurymen. In municipal administration we have salaried engineers and expert accountants on one side, and representatives of citizens on the other. In most state and national affairs the same distinction is familiar. A democracy is competent to judge of policies and results, if it has means of information; and it will not long tolerate gross evils if they are simply brought to light. But in the work of actual administration a body of professional salaried men is required, men who specialize their work and give themselves wholly to it. In the social enterprises of public relief, indoor and outdoor, the same distinction should be clearly and frankly admitted.

If we consider the reasons for providing a legal means of educating and expressing public sentiment about policies

and results they may be summarized in the form of maxims of experience. Helpless invalids, insane patients, paupers in remote poorhouses, feeble minded persons, can not defend themselves, can not reach the organ of influence, can not plead in courts of equity for themselves. A humane society will provide for a hearing in the forum of publicity. History teaches us that where abuses are possible they will occur; that professional officers are not to be trusted to inspect and report on their own conduct in office and be permitted to exercise irresponsible power. When officials resent interference from outside, the alarm should be sounded from every home. A democracy can not dictate a system of medical practice, but it can judge of a policy when its fruits are made known in comparative tables of sickness and mortality. The great public is awkward enough, and sometimes foolish, but it is competent to see the difference between bad and good management of an institution by comparing the use made of severity and violence to secure order, and in the increase or decrease of disease due to filth or neglect. Therefore, granting, as the present writer does, that state boards of control, properly organized, are demanded by the teachings of world experience, it must also be insisted that this concession does not touch the question of supervision. Boards of control are salaried administrators, and if kept in office long enough may become experts. But when infallibility is claimed for them, with audacity of assertion and paucity of proof, we must insist again on the argument that no body of officials has the moral right to pass on its own conduct of affairs. The fact is that we already have boards of control in all the states, perhaps too many of them; and the new movement is simply one to consolidate them, pay them, and secure the advantages of economy and responsibility which are likely to result from the proposed arrangement. It is probable that a board of control for each great group of public institutions, penal, sanitary, educational, charitable, agricultural, etc., may prove to be a wise measure, and experiments are already on trial to test this hypothesis. But the intelligent friends of the poor and helpless must hold together in making the demand that the voluntary service of intelligent and benevolent representatives

of the public shall also be legally recognized; and boards of control should be the first to insist on this principle.

There are, of course, various methods of organizing for free and independent inspection of public administration. Thus in the English prison system a board of visitors has considerable influence. On the continent of Europe the societies of patronage, for aiding prisoners and their families, have long exercised a wholesome influence on penal establishments and legislation, and more than once have broken through the crust of custom which often prevents the growth of ideas in officialdom. In German public charity the voluntary honor office is a large factor, and the bureaucracy, if they have any distrust or envy, seem to be successful in hiding their feelings. In our own country the boards of county visitors in certain states have already accomplished much good, have exposed abuses, have wakened sleepy officers, and have collected facts of immense importance to legislatures. The New York Charities Aid association is a typical example of an independent society, legally recognized, and exercising vast influence. Various prison societies belong to the same type.

The dangers which may be expected, especially in America, from boards of control without legal and capable agencies of supervision, are such as the following: A board which inspects, audits and passes on its own deeds, without check, soon comes to feel that it is infallible and omniscient; or, if it escape this foible, it is more than human. One who is never contradicted may be excused if he rapidly acquires profound confidence in his own judgment. They soon feel the warm glow of satisfaction in the use of unobstructed power. It is a rare absolutist sovereign who begs for a constitution. Strong men like Bismarck chafed at the delays of parliamentary questioners. It is asserted already by men near the heart of secrets that there are gentlemen who rather enjoy seeing superintendents of asylums and hospitals, party leaders, legislators, office seekers, contractors, and even state university presidents cooling their heels in the anteroom of the star chamber of a state board of control. Even if the testimony is questioned this result is inevitable.

Secrecy, the cloud which hides all perils and abuses, is

unavoidable with a board of control without a legal method of supervision independent of it. Reports on forms provided by statute are deceptive; there is no substitute for the inspection of a living person. Partisanship is charged, for the bipartisan board is by no means synonymous with nonpartisan when it comes to redeeming ante-election pledges by the party in power. Such are the fears of most students of the situation, and the fact that the new boards have really rendered important services during the short trial does not quiet anxiety.

It follows from the principle of social interest and solidarity of responsibility that private charities must ultimately be subjected to governmental supervision and control. This suggestion will be resented by those who have been brought up in the frontier conditions of a new country, where distance of social atoms reduced friction and collision. But with the growth of urban life, and the consequent intimacy of contact between persons and societies, more regulation becomes necessary. We are defining new crimes with every legislature, and soon we shall bring immoral and wasteful philanthropy under legal control. Some states have already made progress in that direction, beginning with those associations which receive subsidies. It is true that such control is often a mere pretense, and, at the best, public inspection is not infallible, even with national banks and interstate commerce boards. But this is true of administration generally in American cities and commonwealths, and the remedy lies in improving the service, not in inviting anarchy to remain. The perils of inspection by private organizations is illustrated in a recent assault upon one of the best known representatives of charity organization by an irresponsible money gatherer, whose methods of sponging upon benevolent persons had been exposed and thwarted. In the absence of public supervision of alleged philanthropy private firms of detectives have derived considerable income from reporting to business men in regard to persons and associations who wish to be famous for goodness at the expense of the dear public. Evidently where the owner of an automobile must take out a license before he can use the streets for his pleasure, some protection ought to be given generous people against the legion of well intentioned

sentimentalists and sharp knaves who infest the offices and homes of busy philanthropists with pleas which are plausible but without foundation in reason. It is plain enough to a student of world movements in charity that private agencies may be so conducted as to increase the number of dependents and throw heavier burdens upon taxpayers, as the history of beggars in Italy and France clearly proves, not to speak of innumerable facts in our own cities. Thus it is not uncommon for churches to support a family of dependents until they have remained long enough to acquire a legal settlement and then cast them upon the local government to care for by outdoor and indoor methods, perhaps throughout generations. The first to welcome state inspection should be those generous benefactors whose methods are so wise that publicity would give them distinction and whose generosity is so splendid that its record would add luster to state history. But inspection and regulation by the incompetent appointees of the spoils system would not yield desirable results, and the civil service reform is as vital in this connection as in relation to municipal government and state institutions.

It is said to the reproach of workers in charity that they do not go to the root of the evil and that they are satisfied to mend and patch where radical measures are required for general and permanent relief. Socialists and special reformers are particularly impatient with the entire range of philanthropic activity. But at the present hour the demands of democratic sentiment and of the long look of science are heard and heeded in the ranks of those who come nearest to the lowest stratum of human misery. Intelligent visitors among the poor are also dissatisfied with alleviating measures where anything more satisfactory is possible, but under any system the call for relief will always be heard and make its appeal to social sympathy. The independent and self respecting workmen emblazon on their banners, "Not charity, but justice," and they organize to build the strongest dam possible against the overflowing flood of pauperism. Their struggle for a standard of life is the fight for civilization itself, and is not a mere class contest. Universal suffrage means death to progress, unless the great majority of men have that taste for cul-

ture which comes with a taste of culture. If the pauper spirit were not detested by the multitude, we might easily return to a lax administration of poor laws, such as brought England to the verge of bankruptcy before the reforms of 1834. Scientific charity arrives at the same conclusion by another route. If a very large body of the population were trained by necessity to live upon alms, the taint of degeneration would poison national life. Parasitism breeds moral decay.

Constructive and Preventive Philanthropy is the significant title of a recent book, by Joseph Lee, which gives numerous and interesting illustrations of measures which show the influence of modern science on benevolent enterprises: savings banks, playgrounds, baths, gymnasiums, outings to the country, clubs, industrial training. But the author of this book opens a small window into a future of preventive agencies which at present scarcely rise above the horizon—the insurance of workingmen against economic ruin from accidents, sickness, and the feebleness of old age. He speaks with natural and proper hopefulness of those rare and suggestive experiments made by some of our great corporations, and he adds: "It is said that one seventh of the railroad employes of the country are members of the insurance departments." But why only one seventh? Since it is unquestionably good for them, why not all employes, in all occupations where income is close upon the margin of need, as in Germany? So important has this subject of preventive methods seemed to many active workers among the poor, that the National Conference of Charities and Correction took the following action:

"The executive committee recommends to the National Conference of Charities and Correction, without committing the conference to any particular system, in advance of investigation, to provide for the appointment of a commission of seven persons to consider plans of so called insurance for wage earners in case of accident, sickness, invalidism and old age, with special reference to their effects on dependence and crime, the commission to be continued for at least three years before making its final report."

The president of the conference appointed on this commission, F. L. Hoffman, S. G. Smith, John Graham Brooks,

Amos W. Butler, Frank A. Fetter, E. T. Devine and Charles R. Henderson. This commission has mapped out an investigation and divided the topics among them, and invites contributions of information.

In Germany the value of such universal and compulsory insurance is as well recognized among charity workers as the value of compulsory school attendance. The prospect of securing adequate protection of this kind by individual savings or by private and voluntary initiative is about as hopeful as that of universal education without required attendance and public schools.

It may not be out of place in this survey to suggest a few of the problems suitable for the studies of young graduates. Thus it seems very desirable to investigate at close range the question as to how far and in what ways various methods of poor relief affect the rate of wages in certain industries. The best results can be reached only by a wide and prolonged investigation by the permanent census bureau of the general government. But private students might make experimental local studies which would help formulate the wider investigation of the government, and train agents for its service. In the history of poor relief the influence of grants in aid of wages has been disastrous in the extreme, and there are many kinds of evidence in the records of city and state offices which reveal a similar tendency even in America. But we have not as yet adequate statistical data for a judgment, although the teaching of history compels us to look for precisely the same results which have followed lax administration in similar situations. Unfortunately, history does not repeat itself where forces of the same kind are working on the same materials.

It is especially in connection with what the Webbs call parasitic industries that we may first look for such effects of well known causes. There are certain branches of department stores of a low grade and sweated industries, where we may find the disastrous influence of living partly on wages and partly on public or private relief. Local studies have already made fairly clear the connection between this situation and the increase of pauperism. An investigation on a

large scale is required to eliminate special causes and offer a demonstration which will convince practical men.

The Consumers' league is urging with a tragic array of concrete illustrations the influence of the employment of children in factories, street occupations and mercantile establishments. At present the benevolent public tolerates this robbery of child life, this suppression of play and education, this obstacle to physical development and school training, for the profit of a few who do not propose to support those whose vitality they have despoiled before maturity was reached. Adults, the natural bread winners, are displaced by their own offspring, and even become accustomed to exploiting them as sources of income. This is getting something for nothing, and is permitted only because the public have not the facts spread before them in the bare ugliness of truth. The only investigations which impress the mind and conscience of the busy, kind hearted world are local in character. Imported statistics are like charged mineral water left in an open vessel; for the sparkle and zest are volatile. Facts lose their momentum if projected very far across state lines.

This remark applies to the bearing of drink habits upon pauperism. The temperance reformers have dulled the hearing of the people with their sensational din; and yet they have, with all their exaggeration, been unable to find adequate language to express the fact. It is now difficult to secure a hearing on the subject, for we have supped full of horrors. Local studies, conducted by methods as accurate as those of Wines, Koren and others for the Committee of Fifty, would be very impressive and might serve to prick the jaded attention of many communities, especially if, with an accurate display of the casual connection between drink and tax burdens, there could be proposed measures of improvement which are immediately practicable.

To numerous graduates of our universities we may commend another field for local study—families and tribes of the degenerate stocks like the Jukes, Smoky Pilgrims and Tribe of Ishmael. The archives of secluded country almshouses in many parts of the land have the materials for studies which, even if they did not at once advance knowledge in general,

might serve important practical and local interests. The records of institutions for the feeble minded have not begun to yield up all they might under the guidance of trained investigators; and it is only as one deals with particular facts of concrete reality in the philosophic spirit and method that he comes into a world current of law.

Vol. 10—2

THE EXPANSION OF ORGANIZED CHARITY.

BY ALFRED O. CROZIER.

[Alfred O. Crozier, treasurer of the National Conference of Charities and Correction, was for several years one of the guiding spirits in the Charity Organization society of Grand Rapids, Mich.; because of the excellent results accomplished in that city he urges that similar steps should be taken in other cities.] Copyright 1903 by Charities

Whether the extension of systematic and intelligent methods of public and private charitable administration should be by design or left to mere accident is a problem soon to be faced and settled.

The splendid idea expressed in the work of the summer school of philanthropic work in training men and women for charitable and associational effort will fall short of its ambition if it simply results in turning out a lot of new candidates to bid for the positions now held by present occupants.

It is notorious that the salaries usually paid for service of this kind are far below what such talents would command in business life. Will the salaries be increased or even maintained, in the face of competition by a large number of new applicants stirred with a desire to do good, and willing to begin at almost any price to get a foothold and an opportunity to help in the great humanitarian work to which they have decided seriously to devote their lives? Unfortunately human nature is approximately the same, whether found in the employing trustees of philanthropic institutions or in the managers of commercial enterprises. Charity workers are not unionized and probably never will be, and voluntary increases of salary in either philanthropy or business are rare, except when inspired by one motive, viz.: the fear of losing the services of a valuable if not indispensable employe. The law of supply and demand rules in the realm of philanthropy as in business.

The nations of the world are struggling to find or develop new markets for the products of their industries. The measure of their success determines the demand and prices for their products, and the wages of those producing them. China is

the most sought after plum, because so great in population that its consumption will be enormous once its masses generally are taught to consume foreign importations. America, in her philanthropic, charitable, correctional, and sociological fields, contains hundreds of Chinas, rivaling the orient in disorganization and ignorance, but unlike the Celestial empire, eagerly welcoming improved knowledge and ways when they accidentally discover the blessings of modern methods in their communities.

The inadequate wages of trained workers will be increased and more opportunity provided for those preparing for social service, only by opening new treaty ports in the hundreds of unorganized or disorganized communities of this country. Let a hundred or more cities get the new light and go hunting for trained and experienced persons to take charge of the active organization of such places, and there would certainly be a sudden awakening among the supporters of established agencies and an appreciation of the real value and worth of the patient, quiet, ill paid indispensable heroes whose love and devotion to humanity induce them to turn their backs upon more lucrative business positions or easy lives and to daily meet poverty, suffering and distress, face to face, as we ourselves could not be induced to do, and work out for us the problems which we all know to be fundamental for the safety of our institutions, the progress of society, and the welfare of our country.

If it is wise that charity be organized, is it not wise to organize charity and not leave charity to organize itself? If it has been established beyond dispute in many places, by years of toilsome experiences, that certain methods are the most successful and humane, should not other communities of our common country be given the benefit of this knowledge? If all cities were organized and in coöperation, using common and approved plans, would it not make the work in each easier and would not general progress be more certain and rapid? This being true, should this expansion be left to mere chance or accident, or be organized and wisely directed on an intelligent plan by those whose experience equips them to interest

the right persons in other places, showing them the advantages and best methods of organization?

When the writer first broached this subject at the Toronto session of the National Conference of Charities and Correction, he encountered the fear on the part of many that such effort would be unwise. But an agreeable change seems to be taking place in the minds of some earnest leaders, and there is confidence that something definite will soon be undertaken to take the light from under the bushel and hold it up to guide those in other places from the mire of antiquated ways to the rock of intelligent sympathy and business methods in philanthropy.

The experience of Grand Rapids, Mich., may serve to illustrate and give point to the above suggestions. There, up to fifteen years ago, alms and charity were, to most good citizens, synonymous. Twenty thousand to forty thousand dollars a year was dispensed in outdoor relief, practically without investigation, on the very poor judgment of human nature possessed by the poor director. Children were allowed to come regularly to the department for supplies. As high as five thousand people received aid at a time in that city. Many of these, it has since been discovered, owned houses and lots, were earning good wages or had bank accounts. Grown up, unmarried children who earned good wages, put their parents to public charity as a measure of economy. Politics played havoc with honesty in poor relief administration. About the only record kept was an inaccurate list of names. Each Thanksgiving day the best citizens, with sincere intentions, advertised widely by pulpit announcements and under glaring headlines in the newspapers, that the day was set apart for the practice of charity, that all people who respected the divine injunction were expected to tote out their old clothes, buy a turkey or other tempting provisions, and send to the vacant store selected as headquarters for the occasion; and that everybody who was poor was to come to the headquarters and get in line to be practiced upon. They would get something good and in the lottery might draw something of real value. It was always very successful, attracted splendid crowds, made a fine demonstration and drew forth prayers

and thanks for the manifestation of the presence in the hearts of so many citizens of the holy sentiment of charity and humanity. Indiscriminate giving was the rule, and sentiment the guide.

Now the sad part of all this was that these people were honest and supposed they were doing real good.

The writer then resided in that city and in common with other business men was ignorant of the actual conditions and their effect upon the real problems of poverty. It never occurred to us, and no one ever told us, that these things were wrong, not to say vicious. We simply attended to business and put something extra on the plate on poor Sunday.

It happened that a local clothing merchant once heard the general secretary of a New York state charity organization society deliver an address and was attracted thereby. He mentioned it to a prominent local banker and to the writer, and it was decided to invite N. Rosenau, of Buffalo, and Levi L. Barbour, of Detroit, to address an opera house meeting. With characteristic plainness of speech, Mr. Rosenau startled the assembly with a recital of conditions prevailing in the local public poor department, which his training had impelled him to investigate as soon as he had reached the city; and he pointed out the direct and indirect effect of such conditions on the future of the city and its inhabitants. The effect will be understood when it is known that in three days annual pledges aggregating \$6,500 were secured with which to start a charity organization society. A revolution in practice and public sentiment of course followed.

All this was a mere accident. It should have been done years earlier. There were those who could have done it. The city grasped the undertaking eagerly when the opportunity offered. Are not those who know what is needed in other places, and know best how to bestow it, conscious of a feeling of personal responsibility to coöperate to such an end?

There are hundreds of American cities now in approximately the same condition in which Grand Rapids slumbered fifteen years ago. Why not wake up?

BENEVOLENT INSTITUTIONS.

BY JOHN KOREN.

[John Koren, statistician; born Decorah, Ia., March 3, 1861; graduate Luther college and Concordia seminary; special expert for the United States department of labor; investigated the Gothenburg system of liquor selling; expert for committee of 50 to investigate the liquor problem, 1894-9, and since then has been in state and national service. Author: *Economic Aspect of the Liquor Problem*, and other books, and of many articles in American and foreign reviews.]

Of the 4,207 benevolent institutions in the United States 485 are designated as public. The state of Ohio possesses the largest number of public institutions, followed by New York, Indiana, and Pennsylvania, in the order named. The preponderance of such establishments in Ohio and Indiana is due to the system of county homes for indigent children. The scarcity of institutions maintained at public cost in many communities points, among other things, to the fact that the care of the sick is largely a private enterprise, the communities contributing their share through subsidies to private institutions.

Under private control are 2,359, or 56.1 per cent of the total, while 1,363, or 32.4 per cent, are managed, if not exclusively supported, by religious denominations, orders, or groups of churches. A more detailed inquiry would probably reveal a larger percentage of institutions owing their inception and maintenance to church bodies. The activity of the churches in charitable work of the kind under consideration is particularly notable in some of the newer communities. Thus in Idaho, Oklahoma, Oregon, and Washington about one half of all the benevolent institutions are denominational in the sense that they have been organized and are maintained by the churches. In the southern states, on the other hand, with the exception of Louisiana, the proportion of institutions under church management is comparatively insignificant.

The total population of benevolent institutions on January 1, 1904, was 283,809. During the ensuing twelve months 2,040,372 persons were admitted, and on the last day of 1904 there remained 284,362 inmates. Owing to the impossibility

of securing accurate reports of population from some institutions the enumeration is not quite complete. The establishments for which figures are lacking are, however, among the least important as to size. Could their population have been ascertained, the three totals given above would have been somewhat larger, particularly the number of admissions and the number of inmates remaining at the end of 1904. But the statistics given are sufficient to illustrate the size and movement of the institutional population. It should be observed that they are exclusive of the 156 dispensaries and the 166 nurseries. Neither class of institutions can be said to have inmates in the ordinary sense of the term; moreover, in many instances, no count is made of the individuals frequenting them.

The number of admissions during the year is extraordinarily large and appears altogether out of proportion to the year's increase in the number of inmates. In other words, there were more than seven times as many persons admitted to benevolent institutions in the course of the twelve months as there were in them on the first and last days of the year. The gain in population of the institutions for the year 1904 is represented as 553, but this is probably considerably lower than a perfect enumeration would have disclosed, as more institutions failed to report the number of inmates than to state population at the beginning of the year and the number of admissions.

The movement of institutional population is greatest in the hospitals. In 1904 this class of institutions reported more than one half of the total admissions (1,064,512). Second in importance are the temporary homes, to which there were 868,657 admissions, or about three times the number of inmates on the specified dates. Although the orphanages and permanent homes report, respectively, 70,825 and 29,353 admissions, their daily population is known to be largely in excess of these numbers. The institutions for the deaf and blind likewise display a comparative stability in population, the number of admissions in the course of the year being about one half of the number of inmates on either of the census dates.

For the whole of the United States the number of inmates of benevolent institutions in each 100,000 of population on

December 31, 1904, was 347, and the number of persons admitted during the year in each 100,000 of population was 2,509.6. So far as the individual state or territory is concerned these proportions are clearly determined not so much by the number of institutions as by their kind. States with a preponderance of institutions having a stable population, such as orphanages and homes for the aged and incurable, naturally show a higher proportion of inmates to population on a given date than a state whose institutions are mostly in the hospital class. On the other hand, the ratio of admissions to population is largely influenced by the extent of hospital conveniences, and where these are especially abundant the state will rank accordingly. Oregon furnishes an illustration in point. In ratio of inmates of institutions on December 31, 1904, to the general population, it stands twenty fifth in the order of states, but in ratio of admissions to the general population during 1904 it stands third.

California is first among the states and territories in the ratio of institution inmates to general population on the date specified, having proportionately twice as many as all but the first nine states. And among the first twenty five are the other young states, Colorado, Kansas, New Mexico, Washington, Montana, and Oregon. Again, among the first twenty five in number of admissions to institutions per 100,000 inhabitants are Oregon, which stands as number 3, Colorado, Washington, Montana, Arizona, Utah, and New Mexico. The fact deserves mention, however, that in some of the newest communities, for instance, Arizona, Utah, and New Mexico, many of the hospitals are maintained by mining corporations and are not intended for the general public.

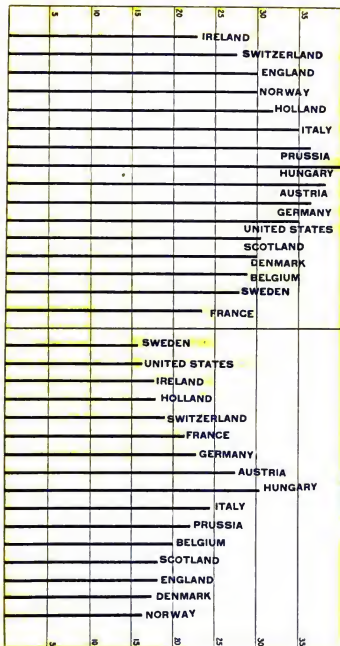
Although the number of admissions to institutions per 100,000 inhabitants is largely governed by existing hospital provisions, the extent of the latter does not always appear to stand in direct relation to the percentages of the urban population found in the different states. If that were the case, Rhode Island would stand at the top of the list instead of fourteenth, New Jersey would move down a few places, Oregon be relegated from the third to the twentieth place, etc. Yet in many instances there is a fairly close correspondence be-

BIRTH AND DEATH RATE OF THE WORLD

PER 1,000 INHABITANTS.

BIRTHS

DEATHS



tween the relative strength of the urban population and the ratio of admissions to benevolent institutions. Massachusetts, New Jersey, New York, Maryland, Connecticut, and several other states furnish illustrations in point.

How pre-eminently the care of persons in benevolent institutions, as measured either by the number of inmates on the given dates or by the number of persons admitted during the given period, is a matter of private charity in the United States is a most striking fact. About 70 per cent of the institutional population found on a particular date and about 80 per cent of all admitted in a year are beneficiaries of private charity (including, of course, that dispensed by the churches) as distinguished from maintenance solely at public cost. It is clear that the establishment and support of orphanages, hospitals, and temporary homes is left largely to private initiative. Permanent homes, measured by the number of inmates, are more generally made a matter of public concern, while most of the deaf and blind provided for in institutions are cared for by the public authorities.

Of the three general classes of institutions considered, the percentages of inmates both at the beginning and end of 1904 are largest for those under ecclesiastical supervision. This is chiefly attributable to the large number of orphanages maintained by churches. In point of admissions private institutions lead, because of the many hospitals under this form of control.

Judged by number of inmates and admissions, the orphanages and children's homes under public management are of relatively little importance. This form of institutional charity is largely left to private initiative, since public institutions claim but 10 per cent of the number of inmates and 10 per cent of the admissions. Although particularly a concern of the churches, the orphanages under denominational management, while containing more inmates on January 1 and December 31, of 1904, than both the public and the private institutions combined, show a smaller percentage of admissions than the private class alone. This circumstance suggests that private orphanages are used more liberally as receiving homes from which children are distributed among

families. It is interesting, also, to note that in point of permanent population the orphanages show a larger percentage than any other group of institutions, having about 32 per cent, closely followed by the permanent homes, with more than 27 per cent, and the hospitals, with about 25 per cent. On the other hand, so far as admissions are concerned, the percentage orphanages contribute to the total for all institutions—3.5 per cent—seems surprisingly low.

Undoubtedly the hospital care of the sick is becoming more and more a public undertaking. But at the present time about two thirds of the patients receive treatment in hospitals managed by private corporations and denominational bodies, the former slightly leading in number of patients on the census dates and markedly in number of admissions. More than one half of the admissions to institutions are to hospitals.

The permanent homes form a singular exception, inasmuch as those designated public show percentages of inmates and admissions more than twice as large as those under private and ecclesiastical control combined. When not provided for in almshouses, the aged, incurable, and other needy persons who make up the bulk of the population of the permanent homes are generally supposed to be cared for by private institutions or organizations. The stability of the population in the permanent homes is indicated by the percentage of admissions, which is but 1.4 of the total number of admissions to all institutions, while a little more than 27 per cent of all inmates are to be found in them at a given time.

The difference between the percentage of inmates in public temporary homes and the percentage of those in private and ecclesiastical institutions of this class, and the disproportionate number of admissions to the public institutions, are explained by the fact that most of the latter are municipal lodging houses that are practically without inmates who remain longer than a night. The varying activities of institutions grouped as temporary homes also account for the circumstance that the population of the homes under ecclesiastical control appears to be more stable than that of the same class of homes under private management.

Institutional provisions for the deaf and blind, being

chiefly of an educational nature, are naturally for the greater part of public origin. The public institutions for the deaf and blind contain more than 70 per cent of the inmates of all such institutions, and show more than 86 per cent of all admissions. The number of deaf and blind under the care of ecclesiastical institutions is almost a negligible quantity. It is true, however, that the deaf and blind under institutional care are far less in number than any of the other classes.

Statements were sought from each institution covering: (1) the amount of annual subsidies from public funds; (2) the amount of income from pay inmates during 1903; and (3) the cost of maintenance during 1903, exclusive of improvements. Entirely satisfactory responses could not always be secured. A total of 43 institutions did not report the amount of annual subsidy from public funds, 225 omitted to give income, if any, from pay inmates, and 241 failed to supply cost of maintenance. Aside from a not uncommon reluctance on the part of institutions to give even the general facts concerning income and cost, it appears that some institutions actually keep no adequate records, while others depend chiefly upon donations of all kinds, the value of which is not easily translatable into dollars and cents. It must not be understood, however, that the absence of statements greatly influences the totals. As a matter of fact, most of the institutions from which financial statements are lacking are among the smallest of their kind. For general purposes the statistics of the extent to which institutions are subsidized out of public treasuries may be considered complete. The cost of maintenance as given is probably an understatement of from \$200,000 to \$500,000.

For the whole of the United States the gross cost of maintaining benevolent institutions in 1903, exclusive of improvements, was \$55,577,633, or, excepting the cost of institutions for the deaf and blind, \$52,053,950. Deducting the income from pay inmates, the cost of maintenance was \$40,729,125, and, exclusive of institutions for the deaf and blind, \$37,306,135.

The above gross cost of maintaining all benevolent insti-

tutions entailed a per capita expenditure of \$0.70 for the United States.

A presentation, by states, of the cost of maintenance for each inmate of institutions on the census dates or for each person admitted (a combination of the two being out of the question) would tend to misleading comparisons. It is suggestive, however, to note that the annual expenditure per inmate on the basis of the number remaining in institutions on December 31, 1904, appears to run from \$489.50 in Arizona to \$100.20 in Mississippi, where it is lowest. Corresponding figures for some other states make the rate for New Mexico, \$418.46; Montana, \$384.34; Massachusetts, \$307.31; Wyoming, \$280.88; North Dakota, \$265.44; Nevada, \$257.14; Connecticut, \$250.44; Pennsylvania, \$240; and New York, which occupies thirteenth place in point of cost, \$228.55. It is perfectly natural that a high rate of cost should be chiefly characteristic of the newer Western states.

Of the aggregate cost of maintenance 29.3 per cent was expended for public institutions, 43.5 per cent for private institutions, and 27.2 per cent for ecclesiastical institutions. These per cents remain nearly the same when the institutions for the deaf and blind are excluded.

Delaware is the only state that does not support a public institution of any character besides the almshouses and hospitals for the insane. The fact that the amount of public moneys voted for institutional purposes in some states exceeds the total expenditures for private and ecclesiastical institutions may indicate a paucity of conveniences of this character, as in the case of Arkansas, Mississippi, Oklahoma, and Tennessee, or that the state undertakes special functions which elsewhere are left to private enterprise, as in the case of Indiana, Ohio, Kansas, and Wisconsin. In 17 states, including some in which benevolent institutional work has attained its largest development, the expenditures for the maintenance of private institutions are larger than those for public institutions.

On the other hand, the aggregate cost of ecclesiastical institutions is larger than that of institutions under private management in the following 20 states and territories: Ala-

bama, Idaho, Illinois, Indiana, Iowa, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Utah, Washington, and Wisconsin.

In all of the states and territories, except Idaho, Nevada, and Oklahoma, part of the cost of private and ecclesiastical institutions is defrayed from public funds. Frequently contributions are made by the local community, or subsidies are voted by the legislatures. Both methods of subsidies involve a recognition of the fundamental duty of the community to provide institutional care for its sick and dependent members, but also indicate, in a more or less pronounced manner, a preference for a vicarious performance of this duty.

In proportion to the aggregate cost of maintenance the ecclesiastical institutions receive a larger share of public bounty than the private; and in 10 states, namely, Alabama, California, Colorado, Illinois, Iowa, New Mexico, New York, South Carolina, Texas, and Wisconsin, the former get the larger part of the actual amount of subsidies.

The differing policies in the states with reference to annual payments out of public funds to private and to ecclesiastical institutions do not conform generally to the extent of institutional operations, in the sense that dependence upon this form of income is greatest where the pressure upon these charities appears to be greatest. There are some notable exceptions, for instance, New York, Maryland, Connecticut, Indiana, and Pennsylvania. In each of these states the percentage of total cost of maintenance derived from public funds is from 19.2 upward. On the other hand, states like Massachusetts, Illinois, Iowa, Ohio, Michigan, Colorado, Minnesota, etc., each of which has an extensively developed system of institutions, get only from 1.1 to 5.0 per cent of the cost of maintenance from public treasuries.

For the whole of the United States 26.7 per cent of the aggregate cost of maintenance in 1903 was covered by income from pay cases. Of the total amount received from this source (\$14,848,508) 3.5 per cent was reported from public institutions, 51.7 per cent from private, and 44.8 per cent from ecclesiastical institutions. In proportion to the cost of main-

tenance the income from inmates was considerably larger in ecclesiastical institutions than in private, a fact which must be attributed to the numerous hospitals under church patronage that are largely maintained by the revenue from patients.

There is only one state without a public benevolent institution, but in 15 states there is no income whatsoever from inmates of public institutions. The explanation is that these states provide institutions at public cost only for the deaf and blind, to whom support and education as a rule are given gratis. In fact, less than one fifth of the income from pay cases received at public institutions is secured by all the public institutions for the deaf and blind.

The fact that the income from pay inmates of the public institutions of Massachusetts is much more than twice as large as that of any other state, and forms 30.1 per cent of the total for the United States, must be ascribed chiefly to the public hospitals in this commonwealth and the legal provisions made for the recovery of the cost of maintenance of indigent patients from the city or town in which they have a domicile.

As regards both private and ecclesiastical institutions, the hospitals report most of the income from pay cases. Among the states in which denominational institutions obtain a larger share of income from pay cases than those designated as private, the following are conspicuous: Alabama, Arizona, Arkansas, Illinois, Montana, New Jersey, South Carolina, Tennessee, Washington, and Wisconsin.

The hospital class leads as to aggregate cost, a little more than one half of the entire sum expended for the maintenance of benevolent institutions being for the benefit of the sick in hospitals. Of the total amount of annual subsidies, hospitals receive 37.4 per cent, and 82 per cent of the entire income of institutions from pay inmates falls to the share of this class. In proportion to their activities, private hospitals receive a much heavier donation from public treasuries than hospitals under denominational management. On the other hand, in proportion to the aggregate cost of maintenance the ecclesiastical hospitals receive a greater income from pay patients than the private hospitals.

Of the total cost of maintenance, 18.1 per cent was expended for the support of orphanages. Of the millions of dollars annually expended for the cost and education of orphans and otherwise dependent children, 44.7 per cent goes to the maintenance of those in institutions under ecclesiastical control which, it should be observed, also obtain proportionately a much larger share of the annual subsidies, and also a relatively larger income from inmates who pay something for their support.

The third place in percentage of aggregate cost of maintenance is occupied by the permanent homes, which are supported at an annual cost of nearly ten million dollars, or only a very little less than the cost of all orphanages and children's homes. In proportion to the number of inmates cared for, the permanent homes are the most expensive of all institutions, a fact which is probably due partly to the character of the inmates and more especially to the circumstance that such a large group of these institutions is maintained at public cost. Only 3.1 per cent of the total annual subsidies is given to the permanent homes, and more than two thirds of the amount was secured by private homes. The latter also show a larger percentage of income from pay inmates than the public and ecclesiastical.

Considering the number of persons cared for in the course of a year, the cost of supporting temporary homes is small, being but 5.5 per cent of the aggregate for all institutions. As is well known, in many temporary homes the inmates receive board and lodging in return for doing various kinds of work, not a little of which results in income, but not of the kind that can easily be put into terms of money, and for this reason the income from pay inmates appears smaller than it actually is. The temporary homes receive in cash from inmates 3.5 per cent of the aggregate for all institutions. The proportionately very large percentage given to ecclesiastical institutions of the annual subsidies received by temporary homes is perhaps to be explained by the fact that the ecclesiastical homes care for groups of unfortunates for whom not only the most effective appeal can be made, but who are in need of special in-

fluences that can not so easily be supplied by public institutions.

A little more than three and one half million dollars is annually devoted to the care of the deaf and blind in institutions, or 6.3 per cent of the total expended for all institutions. Except as they are found in almshouses and other special institutions, the deaf and blind are in many states exclusively, and in most states for the greater part, cared for at public cost. Ecclesiastical charity enters this field only to a very limited extent, and private institutions for the deaf and blind, although comparatively extensive in operations, are in numerous instances maintained only in the absence of provisions of a public character. For this reason, presumably, the private institutions for the deaf and blind succeed in obtaining more than one half of their cost of maintenance from public grants.

Although the cost of maintaining day nurseries is insignificant when compared with the other classes of institutions, the total expended for them in the year aggregates \$327,659. This class of establishments is also made a beneficiary through public subsidies, but probably without exception these subsidies are contributions from the communities in which the nurseries are located.

About one fourth of all the benevolent institutions in the United States are devoted to the care of orphans or other dependent children. Private and ecclesiastical bodies each control 478 establishments, and but 119 of the total are directly under public management. In making comparisons it should be remembered that the details in regard to orphanages in the different states are more or less influenced by the prevailing policy regarding the care of children. If the institutional policy is general, the number of institutions and inmates, cost of maintenance, etc., will be proportionately greater than in a state following a noninstitutional policy. In order to supply a perfect statistical picture of the care of dependent children, it would be necessary to account for all those placed in families without passing through institutions; but to do so is not within the province of this article. The state of Iowa may be taken as an example. It has but 12 orphanages, while New Jersey, with a smaller population, supports nearly four

times as many. Obviously it would be a mistake to conclude that the apparent lack of institutional provisions in Iowa indicates that the dependent children in this state are relatively so few, or that they are inadequately cared for. The explanation lies in the difference of method.

In many instances the actual number of children's institutions in a state is closely related to the number of its inhabitants; but there are significant exceptions, which suggest in some cases lack of adequate provision for dependent children, and in others that they are largely cared for outside of institutions.

Indiana and Ohio are the only states having systems of county homes for children. As a result they are credited with nearly three fourths of the children's homes maintained at public cost. Twenty six states are without any public homes for children. In the following 22 states and territories the children's institutions under church management exceed in number those controlled by private secular corporations: Alabama, Delaware, District of Columbia, Florida, Illinois, Iowa, Kentucky, Maryland, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, North Carolina, Oklahoma, Oregon, South Carolina, Virginia, and Wisconsin. Arizona, Idaho, and Wyoming are as yet without any orphanages.

The amount contributed from public sources to children's institutions in 1903 was \$2,181,784, or 21.7 per cent of the total cost of maintenance. In Delaware, Mississippi, Nebraska, Oklahoma, South Dakota, and Utah no help of this kind was given.

A little more than one tenth of the entire cost of maintaining orphanages and children's homes is covered by income from pay inmates who contribute annually about one million dollars. It is not known what part of this income is contributed by relatives or friends of the children, and what part from public authorities who pay stipulated sums per week or month for the support of those who have become direct charges upon the community. In proportion to expenditures the amounts collected from inmates are smallest in the southern and some of the newer western states.

Day nurseries as yet are located chiefly in a few eastern states with large urban population, and are not found in 26 states. Of the 166 day nurseries in the United States in 1904 no less than 113 are maintained in four states—Massachusetts, New Jersey, New York, and Pennsylvania. Thirty of the entire number are under church auspices and 136 are maintained by private organizations or individuals.

The total number reported as inmates on January 1, 1904, was 7,441, of which approximately one half were in institutions in the state of New York. On December 31 of the same year there was an increase in attendance of 176, which is an understatement, for a large number of institutions failed to report this detail.

Of the total cost of maintenance in 1903 (\$327,659) considerably more than one half was disbursed for the support of the day nurseries in Massachusetts, New Jersey, New York, and Pennsylvania. Of these states New Jersey is the only one in which day nurseries received assistance from the state, the other notable beneficiaries being in Maryland and Tennessee. The total state grants amounted to \$7,675. Generally subsidies under this head must be understood as coming from the local community.

Specific conclusions drawn from the number of hospitals in different states in proportion to population would be meaningless so long as it is impracticable to bring single institutions and their operations into comparison. Clearly, one hospital in a community may perform with even better success the work divided among three or more small institutions elsewhere. Yet the extent of the provisions made for the sick, as manifested by the number of hospitals, points not merely to the stress of life under urban conditions and the like, but to progress in humanitarian work. The figures compel the inference that hospital facilities in many instances are not apportioned among states in accordance with needs, but reflect the extent of charitable enterprise.

Attention has been drawn already to the fact that some communities prefer to subsidize hospitals operated as private enterprises rather than to establish institutions of their own. This accounts for the proportionately small number of hospi-

tals designated as public. Delaware, Idaho, Indian Territory, Kansas, Nevada, Oklahoma, Oregon, and Vermont are without them, and in other states they are represented chiefly by federal institutions. The private hospitals outnumber the public by nearly four to one, and the ecclesiastical the public by two to one. Although the hospitals under private management are about twice as numerous for the whole country as those under church control, the latter are in the majority in the following states: Indiana, Iowa, Minnesota, Montana, Washington, and Wisconsin. In all the eastern states the conditions are reversed, but this must not be understood to signify less activity on the part of the churches; the charity simply does not take denominational form to as great an extent.

There are in the United States about 87 patients in hospitals to each 100,000 of population, while in the same number of inhabitants more than 1,300 were persons admitted to hospitals during twelve months. These figures would, of course, receive substantial additions, were all patients accounted for who frequent hospitals not supported through benevolence in some form. Yet the ratios per population would probably not be materially increased, for the hospitals not enumerated are almost exclusively given over to the care of the comparatively few rich or well to do.

Not only are many hospitals very limited in facilities, but also the number of hospitals in a state gives little indication of the extent of institutional operations. For example, Iowa has four times as many hospitals as Louisiana, or 41 against the latter's 10, yet, both as to number of admissions in a year and the number of patients to be found at any given time, the hospital work of Louisiana is on a larger scale.

22.6 per cent of the gross cost of maintenance was expended for the hospitals classed as public institutions. The cost of the private and ecclesiastical reached a total of \$21,594,784. Deducting for both these classes the amounts of income from pay patients and the annual grants from public funds, the sum which was raised through some other form of benevolence than appropriations from taxes was \$7,580,504. Many hospitals receive substantial aid through donations in kind,

which diminish the need of cash outlay. The value of these gifts can not be estimated.

New York, Pennsylvania, Massachusetts, Illinois, California and Ohio contain about 35 per cent of the total population of the country, yet contribute about two thirds of the cost of maintaining hospitals, or over eighteen million dollars, while the next 21 states, which contain almost exactly the same percentage of inhabitants as the first 6, spend for this purpose less than six millions, or a little more than a fifth of the entire cost for the United States. The 5 states, Missouri, New Jersey Maryland, Minnesota, and Michigan, although containing but 13.6 per cent of the population, expend \$3,698,224 for the support of hospitals, while the last 17 states beginning with North Carolina and ending with Oklahoma have 15.5 per cent of the total population and gave but \$898,419 for the support of hospitals.

These financial comparisons indicate the conditions necessitating extensive hospital facilities rather than the advance in benevolent enterprises, though the latter is more generally a concomitant of settled and prosperous community life.

The subsidies received by hospitals from public funds were \$2,276,336, which equals 18.1 per cent of the cost of maintenance in 1903. The hospitals in the following states and territories were not aided by payments from taxes: California, Idaho, Indian Territory, Nevada, North Dakota, Oklahoma, Tennessee, and Utah. Elsewhere the subsidies run from \$340 in Wyoming to \$725,554 in Pennsylvania, and cover percentages of cost varying from 0.5 per cent in Minnesota to 24.5 per cent in the District of Columbia. Other states having institutions receiving notable amounts are Georgia, Connecticut, Pennsylvania, Alabama, Maryland, Rhode Island, Maine, New Jersey, Arizona, and New York. Institutions in 29 states are helped through subsidies to the extent of less than 8 per cent of the cost of maintenance.

The total sum received by hospitals in payment for care of patients was \$12,181,484, which forms 43.2 per cent of the cost of maintenance. In 24 states, including some doing the largest hospital work, as New York, Pennsylvania, Massa-

chusetts, Ohio, etc., such income covers less than 50 per cent of the cost of maintenance; in 19 states it equals from 50 to 80 per cent of the cost of maintenance; in Indian Territory, Nebraska, North Dakota, and Oklahoma it was, respectively 94.1, 89.3, 96.5, and 82.9 per cent of the cost; and in Utah and Oregon the income actually exceeded the cost, the percentages being 116.2 and 109.7.

There is an apparent contradiction in describing hospitals as benevolent institutions when the amount of money they receive from pay patients is equal to or in excess of the cost of maintenance; but, in general, it should be remembered that to a very large extent the moneys termed income do not represent the personal contributions of the patients or their relatives and friends, but the amounts collected from the public authorities legally responsible for their support. Furthermore, the cost of maintenance as given does not include improvements or general equipment. A hospital may receive income, on account of patients, equal to or larger than the bare cost of running it, yet deserve the appellation benevolent, because it owes its existence to generous endowment, and because the services of physicians and attendants are not reckoned among the items of cost.

Although the dispensaries differ from other institutions in the respect that the persons frequenting them are occasional visitors rather than inmates, they are too conspicuous a part of the medical charity to be ignored. If certain out-patient departments had been counted as separate institutions, which would have been misleading, the total number of dispensaries would have been augmented. Dispensaries that are mere feeders to hospitals run for profit were excluded.

For 27 states no dispensaries were reported. About two thirds of the entire number (156) are found in California, Illinois, Maryland, Massachusetts, New York, and Pennsylvania. In other words, dispensaries as separate institutions are peculiar to large urban centers. Only 11 were maintained at public cost, and 17 were supported by churches, the remainder (128) being under private control.

From 33 dispensaries no statements were obtainable in regard to the number of cases treated during 1904. The total

given, 1,611,651, is therefore lower than the actual number, but gives a hint of the magnitude of the practically free medical service obtainable through the dispensaries. On the basis of the above total the number of cases treated in them to 100,000 of population was, for the entire country, 1,982.3. Nowhere has the system of medical dispensaries reached such a development as in the state of New York, or more particularly the city of New York. There the ratio of cases treated to 100,000 inhabitants reached the remarkable figure of 10,848.5, a ratio nearly twice as large as that for any other state.

Under the title permanent homes is comprehended a wide variety of benevolent undertakings. There are homes for aged dependents without means and for aged persons who can pay a liberal entrance fee, for persons afflicted with various incurable diseases or otherwise disabled, etc. Some of the homes make few distinctions as to the nature of dependence; others are devoted to a special class. To some only adults are admitted; others receive both adults and children, and are, in fact, permanent homes for adults, with orphanage annexes. A detailed classification of these institutions was not attempted, in view of the incompleteness of the data at hand for this purpose.

Arizona, Nevada, New Mexico, Oklahoma, and Utah are as yet without any permanent homes for dependents. The 753 whose existence could be traced are pretty evenly distributed among the states, allowing for the necessity of a proportionately large number in the older communities. In proportion to population Massachusetts leads in institutions of this character. Sixty of the permanent homes are reported as maintained by public authorities. Of those under private management (constituting a large majority) some are endowed establishments and a few owe their origin, as well as continued existence, to the munificence of individuals.

The permanent homes under church supervision are outnumbered by those termed private almost two to one, 13 states being without any. The states in which the ecclesiastical institutions of this kind form the majority are Connecticut, Illinois, Minnesota, South Carolina, Washington, and Wisconsin and the District of Columbia.

How many institutions are rendered practically self supporting through entrance fees is not known. There are undoubtedly some homes for the aged whose main assets from the first are the anticipated entrance fees, while in many more instances the homes appear to look to this income to meet only a part of the running expenses. Other homes are fairly well endowed.

SCIENCE IN PHILANTHROPY.

BY CHARLES RICHMOND HENDERSON.

[Charles Richmond Henderson, associate professor of sociology in the University of Chicago, is one of the world's foremost authorities on scientific philanthropy; he is a graduate of the old University of Chicago and of the University of Leipsic; he has traveled extensively in Europe and America investigating applied philanthropy more especially in regard to prison conditions; he is probably the best known American writer on philanthropic subjects.]

Those who look on only occasionally at the methods of dealing with the so-called degenerate classes often declare that nothing is really known, that guesswork reigns, that one plan is as good as another. This cynical despair of social science is not justified by the facts. As the science of life borrows data and suggestion from the hospital practitioner, so the student of normal society finds a laboratory in the institutions of defectives. Comte long ago said that sociology comes nearer actual scientific experiment in dealing with the defective than with the normal classes. In prisons and asylums we can more nearly control conditions than we can with free self governing families and communities. Social pathology offers an important side light on normal human relations, because the laws of disease seem to be the seamy side of the laws of health, and show them in larger pattern.

Those who scoff at the possibility of building a social philosophy should recognize the fact that every attempt to concentrate all the forces of a commonwealth upon the solution of any specific problem more or less consciously proceeds upon some sort of theory of the ends and the resources of the commonwealth. The art of statesmanship, the organization of a school system or of a system of charities and corrections, imply a theory of the community which would properly be called a sociology, if it were more accurate and complete. It ought not to be regarded as a presumptuous attempt for special scholars to bring out into clearer light, with reinforcement of knowledge at every point and from every special science, a view of society as a whole, when every rural legislator and every superintendent of schools is actually proceeding on the

basis of sociology, often without thinking of his scheme of life under this somewhat novel title.

When a community distinguishes classes of abnormal men, it tacitly acts with a standard of normal men and normal society before its mind. When a people, by legal means or by voluntary associations, constructs a system of institutions for the care of its abnormal members, it acts upon a theory of the objects of society and the normal order of its arrangements. This practical coördination of the special knowledge of economists, lawyers, physicians, educators, is a necessity of life. Sociologists are simply struggling to make this coördination as adequate as possible. A special science out of relations to a general theory of society is as helpless and futile as the mainspring of a watch lying in isolated abstraction outside the watch itself.

Compare the methods of dealing with prisoners in the more advanced reformatories with that employed in backward communities, where the antiquated philosophy of vindictive justice dominates both law and discipline, and perpetuates the passions of lynching, feuds and murder. Modern criminology marks off, with increasing accuracy, the various classes of prisoners—criminals of passion, occasional criminals, habitual criminals, and those congenitally defective persons who should be in custodial asylums for imbeciles rather than in prisons. Criminologists lay stress upon the characters and capabilities of men; the traditionalists persist in relying on definitions of acts, and in seeking to measure exact guilt in terms of time. Science deals with knowable qualities; tradition and popular passion grope for a standard of the unknowable.

We have already a few reformatory prisons in which the more advanced methods of education are employed with hopeful results. A visit to one of these institutions for reformation, with its splendid equipment for regenerating the dwarfed and perverted offender in body, mind, and spirit, awakens admiration. But instantly the question starts in the mind: Why not use these appliances of education in advance of crime? Why not give our public schools the means of preventing the germination and formation of the anti social habit?

Indeed, all penological studies are driving us back to educational and other preventive measures. Reformation is costly and uncertain. Penalties have little influence upon minds not disciplined to foresight of consequences, incapable of connected reasoning. When wages are so low and fluctuating as they are in some ranks of labor, the prison becomes actually inviting, and its terror a paradise to many of the proletariat. Prison reform problems lead straight on to kindergarten and manual training, the trade union, the minimum wage, and related agencies of prevention and degradation. Expert judgment has long since declared that for the socially unfit, liberty is an injury to the individual and a constant menace to society. Legal innocence sets free the recidivist at the end of a brief sentence, while the wild beast in him is yet untamed and the enfeebled will is unable to resist temptation. This cruel policy of mathematical justice is sustained by custom and legal conservatism long after it is condemned by science. The sociological method of co-ordinating study is compelling the lawyers to bring fresh life into a formal text study, and just as truly compels theoretical specialists in anthropology to regard the legal point of view, the certainty, impersonality and impartiality of justice.

The most glaring contrast between expert knowledge and popular custom and law is seen in the legal administration of local institutions—the jail and the county poorhouse. The mere description of an ordinary jail should suffice to condemn it, and would awaken intense horror if the public could know and picture the necessary results of average administration. The local prison is used as a place for the detention of prisoners awaiting trial, sometimes of insane persons, and even of witnesses, as well as for the infliction of short sentences for minor offenses. Frequently, men, women, and youths are confined in the same building, not seldom within sight or hearing of one another. The corridors of many jails are occupied all day long by a motley company of prisoners of all grades of depravity. In this free school of crime, the uninitiated take lessons from adepts in licentiousness and burglary, and thoughtless children become the pupils and intimate companions of tramps and thieves. The local officials seem to have no stand-

ard of comparison. They seldom have any knowledge of the more civilized methods, and have contempt for theorists. In some instances of extraordinary foulness, where the jail may be in the court house cellar, the judges, if annoyed by odors and frightened by communicable disease, are ready, perhaps, to order an investigation. But the essential evils of the system are not merely defects in sanitation.

The detention of the insane even for a moment in a jail confuses nervous disease with crime, and helps to prolong the popular identification of insanity with demoniac possession or willful moral evil. The trial of children and youth in the same courts with older offenders, and their incarceration in jails and bridewells with adults, are causes of the perpetuation and increase of crime. Public opinion tolerates, through ignorance, the punishment of drunken and disorderly persons in jails. It is not felt by unbashful vagabonds as punishment. The district workhouse should provide actual disciplinary labor for a term long enough to affect the habits and character of the demoralized person. The jail should be merely a place of temporary detention before trial, and the cells should be so constructed that no inmate could ever see or meet any other, and those yet uncondemned should not be thrust into purgatory before trial.

The average county poorhouse is another pathetic and disheartening illustration of the tardiness of popular knowledge and belated legal reform. If ordinary citizens knew what almshouses in most regions of the country actually are, in construction and administration, they would demand a change. Stories of abuses come from all quarters. There is absence of classification. On poor farms, men, women, and children herd together, and sometimes sleep in the same dormitory, without even curtains between their beds. In remote places, the demented insane are neglected and treated like animals. Feeble minded women, irresponsible creatures, wander about the country, and return to the asylum to give birth to idiots and perpetuate defect. Honest old people, who have served their country in the army of productive industry for a half century, are shut in, during long winters, as intimate companions of worn out criminals. This does not

often occur, but it should never be permitted. Real working people have a right to protest with bitterness against this unjust confusion of misfortune and crime. If counties are too penurious to provide separate homes for the aged and helpless poor, the commonwealth should interfere.

Several states have in their service, at this hour, a small corps of very competent officials in charge of the feeble minded. Out of about one hundred thousand of these hapless children less than one tenth are in expert custody. The others are scattered in homes, in poorhouses, wander about as vagrants, or find their way to prisons and asylums for the insane. Under competent care, this class can be supported in rural colonies almost without expense to the public, educated as far as their limited faculties permit, made comparatively happy in the society of equals, shielded from the humiliations and sufferings of competition, and prevented from propagating their defects. Here is the beginning of actual social selection. The more advanced states have already proved, under expert guidance, that charity the most tender is consistent with the elimination of the unfit.

The ability to maintain life in competitive industry is a rough measure of fitness for parental responsibilities. The feeble minded are not competent to care for themselves. It is believed that many vagrants have the hereditary character of these degenerates. Their turn for elimination will come next, and in the same merciful way, and then confirmed and hopeless dipsomaniacs may be treated rationally.

The most helpful philanthropy is that which deals with dependent and neglected children, and in this endeavor certain principles have been established beyond reasonable skepticism. We know that infants without mothers cannot live in large dormitories. When a city continues to keep its foundlings in a great institution, in face of the statistics of mortality, it is guilty of their death.

The congregation in huge barracks of orphan and deserted children, past infancy, is now well understood to be injurious to them, so that the system of giving subsidies to church and other private institutions for the support of dependent children is a bounty on bad methods. It corrupts the conscience and

blinds the judgment of good men and women; it dries up the fountains of voluntary benevolence, and it cripples the children. New York city and the state of California may be compared with Michigan and Minnesota, and the result will be ample evidence of the folly of the subsidy system. The policy of placing normal children in real homes, with natural family life and contact with ordinary community problems, may fairly be claimed as the only policy based on science. If experiment has any value in the study of the phenomena of society, then family care must be regarded as superior to institutional custody. The reasons are economic, physiological, pedagogical, and political. The expense of support in institutions is enormous; the health of children is exposed to needless perils of contagion; the artificial training unfits the young person for the actual world; and the relation of the institution to politics, especially if it is a private institution seeking subsidies from public funds, is almost inevitably hurtful.

Public outdoor relief, the assistance of dependent families in their homes, becomes more important with density of population and growth of cities. Students and administrators in this country are divided in opinion as to the necessity and wisdom of raising money by taxation for this purpose. Many believe that pauperism in New York, Brooklyn, and Philadelphia has been better cared for since official relief was abolished. But all acknowledge that, for a long time to come, a considerable sum must be given from voluntary or public sources for this purpose. In the distribution of this form of relief, general principles derived from long experience in many countries have been formulated, but are generally neglected by the sympathetic public.

One who reasons from the world's best thought and knowledge would insist that each dependent person must be treated as an individual; that the relief should be temporary and the application frequently renewed; that the way to normal industry should be kept open at every step, and be made preferable to the path of indolence and beggary. Trained opinion favors a system of coöperation of all benevolent persons and officials, with a common central record, with information accessible to all who wish to aid the poor. The most successful

administration is that which reduces the material relief, and increases the capacity for self support; which tends to restore sound social relations, and lift the decaying parasite into independence and manliness. This view of outdoor relief is exacting, and calls for a high order of ability and a large number of friendly visitors.

Surveying the actual practice in American cities, we discover that every one of these principles is constantly and flagrantly violated. The inquiry for causes is pronounced heartless. The friendly visitor is declared to be a cruel and impertinent meddler, who would substitute good advice for food and warmth. The attempt to bring order and bookkeeping into the chaos of almsgiving is condemned as red tape and presumption. Fortunate is the really thorough charity worker if he escapes the epithet of anarchist or communist because he discovers that individual and voluntary efforts are impotent in the presence of colossal misery, and because he invokes the coöperation of the entire community and the supreme power of the government.

There are reasons for the slow rate of approximation of social practice to scientific demands. The public finds the consideration of defects disagreeable and painful. It is pleasant to think of education, art, industry, and literature; but criminals are odious and idiots repulsive in common thought. Our natural repugnance for defectives tends to awaken contempt. Genius is demanded to discover the essentials of divine personality in obscure intelligence and distorted nature. Comparatively few persons visit jails, prisons, and poorhouses, and most of these who do look about the abodes of misery with morbid curiosity alone, for they have no training in observation and no criteria of judgment. They simply disturb the discipline. It requires previous preparation and skillful guidance to derive benefit from examinations of this kind. Entrance is only too easily secured, in the case of public institutions in America; for an aimless ramble of sightseers, without knowledge or serious purpose, is positively harmful.

Our system of outdoor relief, both public and private, unlike the German municipal system, which provides as visitors a large corps of capable men who serve without salary, erects

a barrier between the broken citizen and the prosperous. Our official methods are bureaucratic in the worst sense; hard, mechanical, rigid in routine, awkward and often corrupt in administration. Our busy people, eager to be rich, farm out their philanthropy, and pay relief societies to distribute their alms and the remnants left from charity balls. Our educated and comfortable ladies and gentlemen know not how the other half lives. If the Elberfeld system could be introduced, or the Boston corps of friendly visitors be organized in all towns, we should know more of the meaning of struggle "down in the folks swamps."

The principal inspirer of philanthropic feeling in the world is the church. But up to recent times the leaders of the church have been educated in a way not very favorable to a wise direction of charity. The separation of ecclesiastical from political power has insensibly weakened the sense of responsibility for wards of the state. Our theological seminaries are just beginning to provide for a study of the methods which best represent the doctrines and practice of the founder of the church in relation to the distressed. Those who give direction to the studies of the church leaders have still to learn much from the saying of Dr. Arnold: "It is clear that, in whatever it is our duty to act, those matters also it is our duty to study." There is great reason to hope that another generation will take up the burden with ampler knowledge, wiser method, and more earnest consecration.

In pioneer conditions only the rugged and dauntless pushed to the frontier. Indians, fever, and hardship selected the feeble for extinction. Free land gave rude plenty to all who could survive, and pauperism was rare. But with our great cities have come new problems. Altruism must find a way to be merciful, and yet reduce the burden of the unfit. There is no prospect for the dependent classes in mere material alms. Many can be educated to self support, and to abandon the proletarian tendency to wear out mothers in bearing and rearing children who must starve on insufficient income. The feeble minded and degenerate cannot be taught this fundamental lesson. Fortunately, they are not very numerous, and can all be easily segregated in self supporting rural col-

onies. When they are removed, the real workers will rise in earning power.

Perhaps the most important means of improving the formerly corrupt and barbarous local charities and prisons in England was the establishment of central supervision. The centralization of supervising power and function in the home office has lifted relief and corrective methods to a high level of efficiency and honesty. Most of our states, however, remain on the plane where England was before this vital reform was introduced. The court house ring is only too generally the despot over taxpayers and paupers. The improvement immediately manifest from recent laws in Indiana and Ohio, requiring the local almoners to report in detail to the state board of charities, is a startling evidence of the necessity for further changes in the same direction.

It is not desirable to discourage local interest in relief or disciplinary measures. Central control should seek to increase rather than to diminish the sense of responsibility of township and county administrators. The state boards which are now established in most of the more advanced states are usually advisory bodies, whose influence is felt in constant and skillful investigations, publication of abuses, distribution of information, education of the people, and guidance of legislators and administrators. The backward states, which have hitherto, through a mistaken notion of economy, refused to establish such boards, are sacrificing the money of taxpayers, the comfort and lives of the dependents, and the efficiency of penal machinery.

It is universally agreed that professional training is required for superintendents and assistants in institutions of charity and correction. But few persons will spend years in school and in subordinate apprentice service, unless they see before them a reasonable assurance that skill and fidelity will be rewarded with advancement and permanence in office.

The bearing of civil service reform on the improvement of our charitable and correctional institutions will be apparent. While all citizens should learn the essential principles of ameliorative method, it is absurd to expect administrative ability in all. The supreme social question in relation to public benefi-

cence is the question of securing trained officials, and keeping them in the full light of intelligent and sympathetic criticism. Progress in this matter depends upon concentrating the general thought and will on a single point, which for the present shall be civil service reform, with its examinations, eligible list, probation, promotion for merit, and security of tenure during the period of efficiency.

Never before in the history of our country was intelligence upon social obligations so general as now, and the process of education is going forward rapidly. The National Conference of Charities and Corrections, the National Prison association, the International Prison congress, have published a body of valuable thought. Naturally, the contributions are of unequal value, but the agreement of experts on important principles shows that opinion is not provincial.

Social science has no ready made set of rules which can fit out a successful administrator; it does not pretend to offer a substitute for native talent, insight, sympathy, and technical training. But it ever remains true that the world's experience, as formulated in history and theory, is needed to correct the narrowness, egotism, and blindness of merely individual experience. It is a hopeful feature in contemporary philanthropy that associations bring together people of various kinds of knowledge and training, and that their publications increasingly influence legislation and administration.

EDUCATIONAL PHILANTHROPY AS AN INVESTMENT.

BY ROBERT A. WOODS.

[Robert A. Woods, university settlement worker; born Pittsburg Dec. 9, 1865; graduated Amherst college, 1886; head of South End House, the university settlement of Boston, since 1891; lecturer on practical philanthropy in Episcopal Theological school of Cambridge; member Boston public bath commission since 1897.]

Copyright 1903 by Educational Review Publishing Company

Philanthropy has corrected its mistakes in large measure by taking to itself the motive of education, and, nowadays, every sort of philanthropy which is worth anything endeavors in all its undertakings to secure educational result. Not only that, it endeavors more and more, as all wise systems of education do, to put itself in a position to learn what the need is. The teacher must kneel before the child, must learn first of all from the pupil, in order that he may safely and effectually instruct the pupil. Educational philanthropy is educational, and has educational value because more and more it gives a great deal of time, takes a great deal of pains, in order to find out the actual conditions in which the people live who need to be influenced and helped.

Mr. Seaver has pointed out to us very clearly that the problem of educational expansion is first of all a financial problem. In educational philanthropy that financial problem is gradually being met by the concrete demonstration that comes from results. An interesting study prepared by the institutions registration department of Boston, presents the statistics for juvenile arrests during the past ten years. It shows that during those ten years the number of juvenile arrests has decreased in a proportion varying from twelve to twenty per cent. The statistician who has prepared these tables gives a tentative explanation for the decrease. He says it has resulted in the first place from wiser ways in dealing with neglected children, and in the second place from the manifold efforts which are now being made throughout the city, to direct youthful energy in healthful channels. When educational philanthropy can present results of that kind, when the information as to those

results can by a sort of vital process and motive be got into the minds of thinking people throughout the city, such people are going to see the value of an investment of that sort, and are going to be willing to pay more in taxes for carrying on the work of educational philanthropy.

A great part of the effort of those who are endeavoring to promote educational philanthropy is to explain to intelligent persons throughout the community just what the need is of new enterprise in that direction, and to explain to such persons in very concrete fashion its definite results. In other words, educational philanthropy has a mission to the educated classes and the resourceful classes quite as distinctly as to those who belong to the less privileged ranks in life.

In the first place, those of us who are interested in this method feel very strongly there must be a greater extension of effort in the way of physical education. We have now, in Boston, a remarkable series of public baths, public play grounds, and public indoor gymnasiums. All of these institutions are used up to the limit of their capacity. The effort in the playgrounds and in the gymnasiums is constantly to raise the standards of instruction, and to make the opportunities of these institutions available in the fullest degree to both sexes and to adults as well as to children and young people. One very interesting use to which the gymnasiums are put is that of providing the right sort of physical training for young men who are later on to enter the city's service in the police department and fire department. Those departments are an object of ambition to many young men in different parts of the city. These young men now find a chance such as they never had before to get the appropriate training. Since the city gymnasiums began their work five years ago the standard for the physical examination for entrance into these departments has risen nearly twenty per cent. It was formerly about sixty five per cent; it is now over eighty per cent. Here in very definite fashion is a result which the intelligent taxpayer must in due time take account of. He must begin to see that it is an excellent financial investment for the city to provide agencies through which the men who are going to serve the city in important ways in the future shall

receive a suitable training, and through which a higher and better type of man can be secured. Those of us who are interested in these city gymnasiums believe that before many years go by we shall be able from definite statistics to prove that there has been a raised standard of public health, of public morals, and of the productive capacity of the mass of the people in the city as the result of the opportunities which the gymnasiums furnish. If that proves true, it is going to be possible to put before the thinking taxpayer a result which will show the value in dollars and cents of this type of public investment.

Then too, educational philanthropy concerns itself with what can not be spoken of more accurately than to call it social education. A great many people think that settlement work concerns itself largely with gaieties. It does. Many boys and girls in settlement clubs are more interested in dancing and in amateur dramatics than in anything else. But we find that interests of this sort may be made the means for securing the most important educational results. Often you can secure points in character when you speak of deportment which you never could secure in any direct way. Very often you can accomplish in your dancing class certain ends which you could not accomplish in your Sunday school class, in the way of permanent growth in character. I have many times seen boys that had never really made any achievement in their lives before, who undertook to present a little play, and who, perhaps, got tired before their parts were learned, and almost had to be galvanized into carrying rehearsals through and presenting the little play at the end; but having given the play in the face and eyes of their friends and neighbors, those boys came to have that wonderful sense of having brought something to pass, and the finished result gave them a self respect and a confidence which they never otherwise would have had. Achievement has registered a distinct upward step in the lives of those boys.

In these simple ways educational philanthropy attempts to take the social life of crowded neighborhoods, to begin with it where it is, and to direct it along helpful channels. We are beginning, I think, in all our great cities to see the absolute

need of just that sort of social training. It is a curious fact that we are very slow about taking progressive steps for public improvement until we are compelled to. The history of sanitary improvement in the cities both of Europe and of this country will show that great steps in the direction of sanitary improvement have rarely been taken except as the result of some dire plague. Cholera or smallpox has compelled the cities of Europe and America to organize their boards of health and to develop thorough, effective methods for urban sanitation. It may be that that will also be true with regard to the moral health of the city. Certainly those who have watched the condition of things on the east side of New York during recent years must have seen that there is a moral contagion and pestilence that comes out of the life of a great tenement district, which in due time, by sure compulsion, will necessitate on the part of the city, either privately or publicly, the careful, systematic organization of such facilities for social intercourse as shall lead in the direction of intelligence and character instead of toward moral destruction.

And then, too, educational philanthropy concerns itself quite definitely with experiments in the direction of training for vocation. One of the things that strike you most strongly in the life of a working class district is the fact that boys and girls, as they leave our public schools, have no sort of training to fit them for entering upon some permanent employment. To a very large extent when they leave the grammar schools, they go into some sort of calling which is essentially juvenile. The boys become messenger boys or go into the newspaper or bootblack business, while the girls become cash girls in great stores. The difficulty with those callings is, that a young person will follow them for three or four years, and at the end of that time be no farther on in his substantial preparation for a life work than he was at the beginning. It is highly important that we should develop educational resources for training those young people to fulfill some increasing use in life. The task of educational philanthropy, wherever it is found, is to a very large extent that of endeavoring to fit boys and girls during the years after the grammar school stage, for taking up some definite industrial career.

Another significant aim of educational philanthropy is that which was suggested by Dr. Felix Adler when he said that just as there are life saving stations along the seacoast, there should be talent saving stations along the shores of poverty. Throughout this country I believe only about six per cent of the boys and girls get beyond the grammar school. In a city like Boston, possibly as many as twenty per cent go beyond the grammar school, though that is perhaps a high estimate even for Boston. This means that eighty or ninety per cent of our boys and girls do not get beyond the grammar school. Take twenty per cent for Boston. That is, roughly speaking, the proportion of the population which may be credited to the professional and commercial classes; the working classes amounting to about eighty per cent of the population of a great city. Speaking roughly then, the children of working class families do not go beyond the grammar school. Any one who has worked in a crowded district in any of our great cities knows that there are numerous cases of exceptionally bright boys and girls who are prevented from going on into the secondary school on account of the poverty, or ignorance, or indifference, or all three combined, of their parents. It is certainly an anomalous situation that if a boy or girl can persevere through the secondary stage and get as far as the collegiate stage, he finds very great resources to help him on through the collegiate stage of his education; while large numbers of promising boys and girls are stopped in the course of their education, at the beginning of the secondary stage. It seems to me there could hardly be any better investment of money than through the provision of scholarships by which exceptionally bright boys and girls whose parents are poor, too poor to second them through the secondary stage of their education, could be sent on through the high school. Some efforts are now being made in that direction, and there is certainly no more interesting line of experiment for educational philanthropy.

I feel very strongly that it is necessary for all of us to take upon ourselves the responsibility of educating the thoughtful people in the community as to the place which education has in the building up of the community. We take

that fact too much for granted ourselves, and we do not take measures to have other people understand it. For instance, in the city of Boston, with its enormous expenditure, involving enormous drain upon the taxpayers, a great part of the expenditure which comes through taxation goes to support institutions which gather up the evil results that come from a bad and bungling scheme of civilization, from an insufficient system and scheme of education. The city hospital, which is one of the finest institutions of its kind in the world, is yet rendering a service, the need of which might be in part obviated. The city hospital costs more than a thousand dollars per day. We have our houses of correction which cost \$600 per day. We have our almshouses, and institutions for neglected children; we have our police force, which comes next to the public schools as an item of public expense. The question is going to be asked before long, from a purely financial point of view, whether there is not some way by which a portion of this vast outlay for the negative, superficial treatment of social evils can be cut off. In due time we shall be able to show to the hard headed taxpayer that by the establishment of public baths, public gymnasiums, public playgrounds, by experiments in the direction of educational philanthropy, a way may be found to cut off some of that expense, and to relieve the city decisively and permanently of some of that burden.

But there is a far more forcible line of argument in support of these experiments in the direction of educational philanthropy. The prime source of the wealth of any country or of any city consists in the productive capacity of its people. We have been depending all along upon importing productive capacity into the city from the village, American and European; but we have got to learn some way now, by which we can develop productive capacity within the lights of the city itself. It is only through a broad thoroughgoing system of education that will touch all sides of life, and provide for all the practical needs of life, that we shall be able to develop that productive capacity. And if we can show to the thoughtful citizen, that education is reaching out in order to bring to the light, and to bring into full power the variety of latent productive capac-

ity that is born into the children of the mass of the people, then I believe that we shall have an invincible argument in favor of a higher rate of taxation for educational purposes, and larger appropriations for the support of educational enterprises.

JEWISH CHARITIES.

BY LEE K. FRANKEL.

[Lee K. Frankel, manager United Hebrew Charities; born Philadelphia, August 13, 1867; instructor in chemistry, University of Pennsylvania, 1888-93; director Jewish Chautauqua society, 1897-99; member and secretary Ellis Island commission, appointed by President Roosevelt, 1903; assistant secretary National Conference of Charities and Corrections, 1902; in charge of summer school of philanthropy, Jewish Chautauqua society, 1902-03; chairman committee on needy families in their homes, National Conference of Charities and Corrections, 1905-06. Editor, Jewish Charity.]

Copyright 1903 by American Academy of Political and Social Science

On April 26, 1655, the board of directors of the Dutch West India company wrote to Governor Stuyvesant as follows: "After many consultations, we have decided and resolved upon a certain petition made by certain Portuguese Jews, that they shall have permission to sell and to trade in New Netherland and to live and remain there, provided the poor among them shall not become a burden to the company, or to the community, but be supported by their own nation."

The records of the department of charities of the city of New York now show that in a Jewish population approximating 600,000 in Greater New York, in the almshouse on Blackwell's island there are seventeen pauper Jews, of whom the majority were blind, idiotic or possessed of some peculiar defect which prevented admission to existing Jewish charitable institutions.

What is true of New York Jews is true of their coreligionists everywhere. The Jew has always cared for his own poor. During the biblical period, the wise and humane laws of the Mosaic code made the welfare of the unfortunate a civic duty, and specified the manner in which assistance was to be given in order to do the least harm to the recipient. After the destruction of the commonwealth, the common woe which followed the dispersion brought into play new forms of charitable effort to meet the need and distress occasioned by the acute poverty of the people. It is the irony of fate to say that the Jews provided for their poor during the middle ages and the centuries which preceded and followed them. Jewish charity was sectarian through compulsion. When every man's hand was raised against the Jew, rich or poor, it followed that any

charitable provision for the latter class must of necessity be arranged by the former. And the pity of it all was that the charity of the Mosaic legislation was not narrow and sectarian. It could and did include within its scope the stranger and the non-Jew. It was broadly humanitarian, having regard for the servant as well as the master. It was a world wide scheme of philanthropy, the like of which is not to be found to-day, since it was grounded not merely on the bases of love and pity, but on justice. The gleanings of the field were not given to the poor man as a gift, but as his due. Similarly the tithes were exacted from all, rich and poor alike, in the nature of an assessment to carry out the principles of justice and righteousness on which the charity law was based.

In our modern day, under more favorable conditions and auspices, the Jew has, to some extent, reverted to the non-sectarian idea, in his philanthropies. Hospitals, as a rule, supported and endowed by Jews, throw open their doors to sufferers irrespective of creed, color or nationality. Other instances could be cited of charities not medical, organized along similar lines. The free employment bureau of the United Hebrew charities makes no distinction with its applicants. The educational alliance offers its clubs and classes to Jew and Gentile alike. Jewish agencies, giving material relief, or to use a better term, those which care for the needy in their own homes, in the main confine their work to the beneficiaries of their faith, without, however, making any rigid distinction. On the other hand, the trend of Jewish charity has been in the direction of caring for the Jewish poor, solely through Jewish agencies, and without the intervention or coöperation of other sectarian or nonsectarian societies or institutions. Such a condition of affairs is the resultant of the compulsion of the centuries. The task which was at one time assumed of necessity has to-day become a proud duty. What in Stuyvesant's day was obligatory and mandatory, is to-day accepted as a voluntary responsibility.

To what extent and for what length of time the care of the Jewish poor may remain exclusively in Jewish hands, it is impossible to say. The question is hardly a religious one. Jewish poverty is due mainly to economic and industrial

causes. It is true that religious persecution is largely at the bottom of these causes, but the condition which such persecution has produced is not to be overcome by any organization or set of organizations founded on purely religious lines. If the impoverished Jew requires the interference of his wealthier coreligionist, it is because the latter is better able to understand his needs and has a peculiar, specialized knowledge of a peculiar class of individuals. Were it possible for public charities or for nonsectarian private charities to grasp the fundamentals of Jewish poverty, to obtain that keen insight into the modes of living and thought of a heterogeneous people whose common meeting point is their religion, an insight so necessary to bring the proper forms of relief into play, there is no reason why the poor Jew should not be the recipient of the charitable impulse of the entire community. The Jew's religion *per se* is not a factor in the solution of his physical needs. It is characteristic of his history that the greater his poverty and distress, the greater has been his religiosity and his steadfastness to his ethical and religious convictions. It is a far cry, however, to the time when the Jew will be able to lay down his self assumed burden and delegate it to others, not only ready and willing to shoulder it, but competent to unravel the intricacies of the Jewish character, whose roots are deeply grounded in centuries of tradition. For the present the Jew must care for the Jew.

The problem of the Jewish charitable societies of the United States to-day is the problem of the care of the immigrant. As such, it passes beyond merely local lines. In some of its manifestations it is national in character and in few it has an international significance.

The fact that the large bulk of the needy Jews in the United States reside in New York is accidental, and concerns the Jews of Denver and San Francisco equally with those of the eastern seaboard cities. Insofar the problem is a national one. Moreover, to deal intelligently with the question requires a knowledge of the immigrant's antecedents, the impelling motive which brought him to the United States, and

an acquaintance with his previous environment. And here the international phase of the question comes in.

Roughly speaking, it may be said that there are no American born Jewish poor. Of the 10,061 families who applied for assistance to the United Hebrew charities of New York during its last fiscal year, 2 per cent were born in the United States. And of these the majority of heads of families were of the first generation. Jewish dependents who have an ancestry in the United States of more than two generations are practically unknown. Nor can it be stated that there have ever been enough native born dependent Jews to make an issue, since the Stuyvesant episode. In the report of the president of the above society for the year 1881, the statement is made that during no time since the formation of the society had there been less want than during the first six months of the fiscal year just ended. It must have been gratifying to those present at the meeting to learn that after all the poor in the city had been given adequate relief, there was still in the society's treasury a comfortable balance of over \$14,000. During the following year, so large were the receipts of the society and so small the demands of the regular recipients, that the balance in the treasury at the end of the year had swelled to nearly \$19,000.

In the year 1881 began that great wave of emigration from eastern Europe, the end of which is not yet. Driven by a relentless persecution, which endangered not only their homes but frequently their lives, thousands of Jews were compelled to flee from their homes to seek new residence on these shores. The Russo-Jewish committee which originally undertook the work of caring for these immigrants turned it over very shortly to the Hebrew Emigrant Aid society, which came into existence in December, 1881. In one year this society spent \$250,000, \$50,000 less than had been spent by the United Hebrew charities of New York in the seven years of its existence. In the first and only annual report of the Emigrant Aid society, its president outlined as tersely as possible the efforts that had been made to provide homes and occupations for the thousands of fleeing exiles who reached these shores during the momentous summer of 1882. In the month of July the committee

spent for board and lodging alone over \$11,700. Of the herculean efforts of the members of the committee, of the sacrifices of time and money, the report in its modesty makes but scant mention. The full history of the Emigrant Aid society is yet to be written.

With the gradual falling off in immigration, the Emigrant Aid society went out of existence, and the care of the needy immigrant who remained in New York and who became impoverished after residence, reverted to the United Hebrew charities. In 1885 immigration again began to grow heavier, and continued to grow in such numbers that in the following five years over 120,000 immigrants arrived at Castle Garden. In 1890 the immigration reached the figures of 32,321, the largest number ever recorded up to that time.

With all that had been done, the real work of the charities was but to begin. In 1891 the religious persecution of the Russian Jews reached a climax. In the year ending September 30, 62,574 immigrants arrived at New York, of whom nearly 40,000 arrived between June and September. The entire charitable effort of the New York Jewish community was for the time directed out of the ordinary channels and applied to this monumental question of caring for the arriving Russian Jews. The Baron de Hirsch fund, instead of utilizing its income for its educational work, appropriated over \$67,000 to the United Hebrew charities to assist in the work of the immigration bureau. Over \$175,000 was spent by the United Hebrew charities during this year. In September of 1891 it became apparent that there would be no cessation to the immigration, and that much larger funds would be necessary to give anything like adequate assistance to the unfortunates who were arriving at the rate of 2,000 per week. The enthusiasm which was aroused at a banquet tendered to the late Jesse Seligman brought into existence the Russian Transportation fund, which added over \$90,000 to the revenues of the United Hebrew charities and which was given by citizens of New York, irrespective of creed. Later in the year, a standing committee of the society known as the Central Russian Refugees committee was organized, and was made up of repre-

representatives of the Baron de Hirsch fund, the Russian Transportation fund, the United Hebrew charities and the American committee for ameliorating the condition of the Russian exiles. The last committee was organized to secure the coöperation of relief societies in other cities, in order that the various European societies who were assisting the persecuted Russians to emigrate should thoroughly understand the attitude of the New York organization.

The year, October, 1891, to September, 1892, will ever be a memorable one in the history of Russian emigration and of Jewish philanthropy; 52,134 immigrants arriving at the barge office in that time. The treasurer of the United Hebrew charities paid out the enormous sum of \$321,311.05, of which \$145,200 was spent by the Russian Refugees committee between February and September. Like the Hebrew Emigrant Aid society, the history of the central Russian Refugees committee is still to be written. At present it is included in the bald statement of a treasurer's report. Should it ever be published, it will tell a tale of devotion, of altruistic effort, of sacrifice, of noble charitable impulse unparalleled in the history of American Judaism.

Since the year 1881, fully 600,000 Jewish immigrants have arrived at the port of New York alone. Of these the bulk comprise refugees from Russian and Roumanian persecution, Austrians and Galicians. They come from countries in which many of them lived under conditions of appalling poverty. The records of the immigration bureau show that from the standpoint of material wealth, these immigrants are below the average of immigrants from other European countries. Due to their previous condition a goodly percentage is illiterate. On the other hand, the number of skilled artisans and craftsmen is so large as to be distinctly noticeable. From the standpoint of dependency, it will be of interest to study to what extent this large body of immigrants has added to the dependent and delinquent classes of the communities in the United States. The only figures that are at hand are those of New York, which are higher than would be found in other cities and towns, for reasons that are obvious.

In December, 1899, the writer made a study of 1,000

families who had originally applied to the United Hebrew charities for assistance in October, 1894. Of these 1,000 applicants it was found that 602 had not applied for assistance after December, 1894. Of the balance, 67 families were dependent on the society to a greater or lesser extent in January, 1899. More detailed investigation disclosed the fact that nearly all of these 67 applicants were made up of families where the wage earner had died, leaving a widow with small children, or of respectable aged and infirm couples unable to be fully self supporting, or of families in which the wage earner had become incapacitated through illness. In other words, after five years over 93 per cent of the cases studied were independent of charitable interference.

While the above study was limited in its scope, and while the deduction which can be drawn from it must be accepted with reserve, it is nevertheless typical of Jewish charitable conditions. The marked feature in the care of the Jewish poor in the United States is the almost entire absence of the so-called pauper element. Even the sixty seven families above mentioned can not be included in this category. Widowhood is the resultant of purely natural conditions, and when it afflicts the poor mother with a family, it frequently produces a condition of dependence which has in it no characteristic of demoralization. The brightest and most hopeful chapter in the history of Jewish charity is the avidity and eagerness with which its beneficiaries, bereft of the main wage earner, become self supporting and independent as soon as the children are old enough to contribute to the family income.

If there is one cause more than another leading up to this condition, it is the absence of the drink evil among the Jews. The instances in which drunkenness lies at the bottom of Jewish dependency are so infrequent that they may be ignored. Combined with the absence of this vice, there are other virtues engrafted on the Jew for centuries, all of which tend to the preservation of his self respect and his self esteem.

Among these are the love of home, the inherent desire to preserve the purity of the family, and the remarkable eagerness which he shows for education and self improvement. Poverty with the Jew does not spell degeneracy. He has

known it too long to fear it, and even through its worst invasions, he has come forth stronger, more confident, more self-reliant. Poverty he knew in darkest Europe, where it was forced upon him. He brought it with him when he came to the United States, and under the beneficent environment which encompassed him here, he has escaped from its clutches to a large extent. The small percentage who become or remain dependent after a residence of any length in the United States are influenced by causes extraneous to the individual, and which are mainly the product of their environment. What these causes are will develop subsequently.

This detailed exposition of Jewish poverty is timely, in view of the fear that has been expressed of late, that continued Jewish immigration, together with other immigration from oriental Europe, may develop potentialities harmful to American customs and thought. It is feared that pauper elements will be introduced into American life, which may become obnoxious and detrimental. A discussion of the question is outside the province of this paper. So far as the Jew is concerned, the fear is without warrant of fact. The history of the Jewish charities in the United States demonstrates nothing more forcibly than that the Jewish immigrant, be he German, Russian, Roumanian or Galician, readily adapts himself to his American environment, easily assimilates the customs and language of his adopted country, and even though he may temporarily require assistance, rapidly becomes independent of charitable interference. The immigrant Jew is frequently poverty-stricken. He is rarely a pauper, in the sense in which the word is most commonly used. He is not found in the besotted, degenerate, hopeless mass of humanity constituting the flotsam and jetsam of society, the product of generations of vice and crime and debauchery, which makes up the scum of our present civilization. Given the opportunity and the proper surroundings, the immigrant Jew will become an addition to the body politic and not a menace.

From what has preceded, it will be comprehensible that the Jewish charities of the United States, having a special problem with which to deal, have instituted special methods for its solution. In the main, relief organizations have fol-

lowed the organized methods of sister societies. In the past twenty years, new organizations of all kinds have sprung into existence to meet the demands made by the constantly increased immigration. To revert to New York, when the Central Russian Refugees committee went out of existence in January, 1893, the decrease in immigration no longer warranting its continuance, the active work of assisting the arriving immigrants devolved upon the United Hebrew charities.

The work of this society will be cited here somewhat in extenso, since it is typical of similar Jewish organizations throughout the United States. The report of the fiscal year ending September 30, 1902, shows that 10,061 individuals and families applied for assistance. Of these, 5,603 had applied for the first time. Material relief was granted to 8,125; 1,270 were found not to require assistance of this kind, and 666 were refused assistance for some cause or other. The society conducts an employment bureau which is free to employer and employe, and during the last fiscal year found employment for 5,112 applicants. It grants relief in kind, including groceries, clothing, shoes, furniture, etc. The extent of the society's work in this direction will be gathered from the statement that 48,802 garments and pieces of furniture were distributed last year. The annual disbursements for material relief alone amount to over \$110,000 per annum. Ever since its organization twenty nine years ago, the society has endeavored to uphold the principles of organized charity. In some instances it has antedated the charity organization societies themselves. We need but mention the giving of relief in amounts adequate to make the recipient independent of further intervention on the part of the relief giving agency, and the establishment of a graded, carefully regulated and supervised system of pensions covering if necessary a long period of years. As a rule, these pensions are given only to families where the wage earner has died, and where, unless such provision were made, no recourse would be left, except the breaking up of the family and the commitment of the children to orphanages and similar institutions. To obviate the necessity of such commitment, the United Hebrew charities disburses annually over \$30,000 in pensions. In the history

of the society there is no form of relief which shows such good returns for the investment made. Families so supported do not become pauperized, since the subsidy which is granted enables the surviving parent to devote her time to the proper rearing of her children so that they may become useful and intelligent citizens. To such children the society stands in loco parentis. Dependency of this kind does not lead to degeneracy. Where the home can be preserved, where children can develop under the care of the natural guardian, there is little likelihood of dependency extending to succeeding generations. So far as the Jew at least is concerned, this fact has been too often and too amply evidenced to require further illustration.

A word may be said here on the question of adequate relief. In the revulsion which accompanied the indiscriminate almsgiving of earlier decades, the so-called organized charities which resulted therefrom frequently went to the other extreme and withheld material relief in the fear of its baneful effect on the recipient. Nothing is more characteristic of our present day charities than the gradual return to the sound doctrine that material relief is not the end desired, but merely a means to the end, and that it must be used, if necessary, equally with other forms of relief, and must be given adequately if at all. Jewish charity has always upheld this belief. Granted dependency, and material relief in many instances follows. Its danger lies in giving it as a dole. If it must be given, let the amount of it be proportionate to the applicant's needs and not to the amount that can be obtained from a more or less charitably disposed community.

Along these lines the United Hebrew charities frequently grants assistance, presumably as a loan, in amounts varying from \$50 to \$250. These loans are made in special cases, where it is not possible to make the applicant self supporting through the ordinary channels of employment, etc. A wage earner who has been incapacitated through illness or injury and hence unable to follow any routine work, may still be established in some small business venture and be able to support his family. Thousands of dollars have been spent by the United Hebrew charities along these lines with the most gratifying

results—not only have beneficiaries become independent of the society, but many of them have managed to repay the loans made to them.

Of all the problems which confront the average charity organization, possibly the most perplexing is the one of the family in which the mother must be the wage earner. The kindergarten and the day nursery have by no means solved the problem. They are at best but makeshifts in an attempt to solve a situation which has its root in economic and industrial conditions. Again, the factory removes the mother from her sphere of influence over her children, and opens an opportunity for the growth of incorrigibility and waywardness on the part of the latter. In the hope of partially overcoming this difficulty, the United Hebrew charities has for some years conducted a work room for unskilled women in which the latter are taught various needle industries, in the hope that they may eventually be sufficiently accomplished to work in their own homes, and in this fashion supplement the family income. The amount of such work that can be found is limited. More and more, daily, the factory is competing with home industry, to the exclusion of the latter. A study made by the society last year showed that work could be obtained for women to do at home in industries such as silk belt making, men's and women's neckwear, garters and hose supporters, paper boxes, slip covers for the furniture trade, over gaiters and leggings, dressing sacques, hats and caps, flowers and feathers, beaded purses and other beadwork, dress shields, incandescent light mantels, embroidery and art embroidery, passementerie work, bibs, knit goods, etc. In the society's workroom the effort has been made to teach such industries to unskilled women, so as to enable them to become at least partially self supporting.

It is needless to state that in a system as comprehensive as the United Hebrew charities desires to be, provision has been made to alleviate distress in all its forms. Under the plan of dividing the city into districts, immediate relief can be given to emergency cases. These districts are in charge of coöperating societies known as sisterhoods, who are responsible for the condition of the poor who have been placed in their care. Each of these agencies is practically a miniature

United Hebrew charities. Not only have they organized centers for the distribution of material relief, but along the lines of a more progressive philanthropy, the sisterhoods have developed day nurseries, kindergartens, clubs and classes of various kinds, employment bureaus, mothers' meetings, and in fact have become a social center for the poor of their neighborhoods. Since a large percentage of the distress which is met with is occasioned by illness, medical relief of all kinds has been organized. Each district as a rule has its physician and its nurse, and where these are not at hand, coöperation has been effected with other organizations specially equipped for such work.

In very recent years, the spread of tuberculosis among Jews has merited the earnest attention of the society, and among its other activities it has been a pioneer in developing a systematic plan for caring for such tuberculous applicants in their own homes, for whom no provision could be made in existing sanatoria. The campaign thus begun has been not only a charitable, but a social one. Not only have these unfortunates been given food, nourishment and medical care to aid them towards recovery, but in addition thereto, instruction has been given them in the rudiments of sanitation, and in the prevention of infection. It is significant that the work of the United Hebrew charities in this field has been followed to some extent by the recently organized committee on tuberculosis of the Charity Organization society. So successful have the United Hebrew charities been in this undertaking, that it points with pride to the beneficiaries who have recovered their health and who have been made self supporting in outdoor pursuits in such a manner that the likelihood of a recurrence of the disease has been materially lessened.

As stated before, the work of the United Hebrew charities of New York has been cited in detail, since it illustrates the methods adopted by practically all relief agencies in the United States. The name United Hebrew charities, as applied to the New York organization, is somewhat of a misnomer, since it does not include all Jewish charitable agencies in the city of New York. It would be more proper to speak of it as the consolidation of all the purely relief societies which existed in New

York prior to 1874. Aside from these, there are to-day hospitals, orphanages, technical schools for boys and girls, trade schools, day nurseries and kindergartens, guilds for crippled children, burial societies, loan societies, societies for maternity relief, and a goodly number of smaller organizations which have been founded by the immigrants of the last twenty years.

It is estimated that there are over one thousand Jewish organizations and societies in the city of New York to-day, whose activities to a greater or less extent are directed along philanthropic lines. Practically all of the larger organizations, such as the hospitals, etc., work in coöperation with the United Hebrew charities. It is only a question of time until even the smallest will direct its activities in consonance with the work of the central society.

In some of the other cities in the United States, where the question of the care of the poor is not so complex as in New York, closer coöperation has gone by leaps and bounds. In cities like Philadelphia, Cincinnati, Chicago, Cleveland and others, the individual societies have formed federations of charities, the purpose of the federation being to express the philanthropic impulse of the community in terms of greatest economy, the smallest amount of friction and the highest possible efficiency. In Philadelphia the federation is the common treasury. It acts as the common collection agency of all moneys, and distributes them pro rata among the various societies and institutions whose autonomy is not impaired by this method. In other cities, this plan with some slight variations is in force.

In addition to these local federations, the various societies throughout the United States have joined together to form a national body known as the National Conference of Jewish charities. At present it comprises the relief organizations of fifty three cities.

At the meeting of the National Conference of Jewish charities held in Detroit, the writer introduced a resolution advocating the establishment of a central bureau for the placing out and boarding out of dependent Jewish children in private homes. At that time the work of devising such a plan was delegated to the independent order of B'nai B'rith,

a fraternal Jewish order, which at present has the entire subject under discussion, and has drafted a plan which has been submitted to the various Jewish societies and institutions throughout the country.

Some idea of the extent to which Jewish charities have been developed in the United States may be gathered from the following: In practically every city and town there are benevolent societies which look after the interests of the poor in their midst. Jewish orphan asylums are established in the cities of Atlanta, Baltimore, Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Newark, N. J., New Orleans, New York, Philadelphia, Pittsburg, Rochester and San Francisco. In New York there are three institutions and in Philadelphia there are two. New York has four Jewish hospitals, and Philadelphia has two. Baltimore, Chicago, Cincinnati, Denver, New Orleans and San Francisco have each one. Homes for the aged and infirm are found in most of the large cities. Similarly, educational movements along philanthropic lines are developing throughout the country. These include organizations such as the Hebrew Educational society of Brooklyn, the Hebrew Education society of Philadelphia, the Jewish Training school of Chicago, the Hebrew Free and Industrial school society of St. Louis, the Hebrew Industrial school of Boston, the Clara de Hirsch home for working girls, the Hebrew Technical school for girls, the Hebrew Technical institute, and the Baron de Hirsch trade school, the last four being situated in the city of New York. The Maxwell street Settlement of Chicago and the Neighborhood house in St. Paul are under Jewish auspices. Cincinnati, Milwaukee and Cleveland have Jewish settlements. In New York the educational alliance, the largest institution of its kind in the United States, has within the past few years developed a settlement with resident workers.

Earlier in this paper reference was made to the fact that much of the Jewish dependency in the United States and in particular in the large cities is due to causes that are not inherent in the individual but are objective and not subjective; in other words, are a product of his environment. Of the million Jews in the United States nearly 600,000 reside in

the city of New York and of the latter over 50 per cent reside in one square mile of territory on the east side of the borough of Manhattan. The recent agitation in regard to tenement house legislation in New York is still too fresh in the minds of students of this subject to require much further mention here. It will be remarked, however, that in the campaign which was made to preserve the vital features of the present tenement house law, the Jewish residents on the east side of New York were a unit in demanding that no drastic changes in the law be made. Similarly at a recent municipal election, it was the citizens and voters of this same district who rose en masse and in a campaign that was startling in its uniqueness and originality, purged their neighborhood of the vices and immorality which existed there. And this brings us to the point at issue.

Whatever views the interested may have on this subject, it can not be denied that there are limits to the housing of individuals in a restricted territory. Family life can not be properly maintained without a certain amount of privacy, and one of the essentials for the procurement of the latter is a sufficiency of room. The danger to morals which lies in overcrowding, is due primarily to the inability to carry on a natural home life. The unit of society, after all, is the family, and the preservation of the latter means the preservation of the social fabric. With this thought in mind, it is not difficult to understand how a people, who through the ages have been heralded as the champions of purity in the home, have through the conditions under which they live, taken on some of the attributes of their surroundings and absorbed some of the deteriorating effects of their environment. The natural concomitants of overcrowding are disease and vice and crime. The Jew's power of assimilation is proverbial. It is but natural therefore that he, along with his Christian neighbor, should be attacked in his moral fiber in the overcrowded tenements in which he lived; that he should contract diseases which were new and strange to him, and to which he had formerly not been liable. In fact, his apparent immunity to tuberculosis to-day, in spite of conditions, is a medical anomaly. The wonder is that a greater percentage of the Jewish popu-

ation residing in the so-called Ghetto of our large cities has not fallen victims to the vices and diseases which breed there. The concern of the thinking Jew lies in the fact that the percentage of Jewish vice and crime and disease as found to-day in our large cities, small as it may be, is nevertheless distinctly larger than statistics show to have been the case heretofore. To the student of affairs, there is a menace in a condition of things which on its face shows such dangerous possibilities. Referring to New York in particular, it cannot be denied that the city, through its geographical position, has peculiar limitations with respect to population which cannot be overstepped without a serious injury to the community. As a matter of fact, certain sections of the city, particularly those in which the poorer elements of the population live, have long since passed the boundaries of normal housing, and there has resulted a harvest of poverty and vice, crime and disease which are the adjuncts of such abnormal congestion.

So far as the Jews are concerned, nothing could be more indicative of these conditions than the amount of so-called juvenile delinquency. In the house of refuge on Randall's island, there are over 200 Jewish boys and girls. In the juvenile asylum there are 230 Jewish children under sixteen years of age committed for various misdemeanors. Compared with the entire Jewish population of the city, the number is insignificant, and the ratio will probably be found to be considerably lower than that of the general population. To the Jewish philanthropist and sociologist, there is cause for alarm in these figures, because he sees that the crowded life of the streets, the lack of playgrounds and breathing spots, the absence of proper home surroundings, have injurious effects on the Jewish child, to whom the simplest legal misdemeanors were in the past unknown. And what is true of the child is true of the adult. Whatever parasitic poverty may exist among the Jews in the United States and in particular in New York, whatever percentage of criminals and vicious persons may have developed, the results are in the main due to the overcrowding and congestion, to which their poverty has subjected them.

How can an increase of these evils be averted? The

remedy is plain and at the same time simple. The unfortunates, whom poverty and oppression have thrown together in such close proximity and who are compelled to live under such unnatural conditions, must be given the opportunity to settle in localities where ample room will be given for normal, physical, intellectual and moral growth. In New York, with characteristic insight, many are realizing the impossibility of full development in their present restricted environment and are taking up residence in the less settled outlying section of the city. There is no doubt that the improvement in transportation facilities, resulting from subways and tunnels, will considerably diminish the population of the east side. To effect large results, some comprehensive scheme is necessary to relieve the congestion and to prevent the possibility of a recurrence of this congestion.

So far as the dependent Jewish classes are concerned, no scheme of philanthropy that can be introduced into the congested Jewish quarter of New York city can be more than palliative, that will permit of a continued increase in the number of residents of that section. More hospitals may be built in the city, more orphan asylums be endowed, settlements and neighborhood work of all kinds be organized, and double and even treble the amount of money be spent in direct relief—all these agencies can be only remedial in nature. They are not distinctly curative. All of them, to use the words of Miss Richmond, merely tide over the sufferer into the miseries of next week. The causes which underlie the Jewish dependency as found in large cities are fundamental, and relief to be permanent and preventive, must strike deep enough to reach the roots. An increase in institutions and agencies working under the existing conditions may, if any thing, increase the number of applicants for assistance. There is no doubt that the presence of relief organizations, orphanages, etc., in a community, tends to weaken the moral responsibility of many a wage earner through the consciousness that if he shirks his obligations to his family, society will assume them.

For this reason scientific Jewish philanthropy must develop along the lines of placing those who are now dependent and those who may become dependent, in such economic con-

ditions that they may become independent. They must be located in communities and in surroundings where industrial competition is not so fierce that they can not, even with the best of effort, earn living wages; where it will not be necessary for relief organizations to expend a greater portion of their energy in supplementing insufficient earnings; where housing and living conditions are not of such a kind as to aggravate the trouble instead of improving it; where the wage-earner may have a chance to rear a home in the true sense of the word, to educate his children, to breathe fresh air and to live under sound sanitary conditions. There is one way to accomplish the above,—by the removal of large bodies of wage earners with their families to other cities, and in particular to towns throughout the United States.

Two years ago the Jewish Agricultural and Industrial Aid society of New York city undertook to distribute Jewish residents of New York city, who were willing to go, to other places in the United States, where work had previously been found for them. In the first year the society sent out 1,800 persons, in the second year 3,200 persons. The plan of the society is to find industrial positions anywhere in the United States, and having found them, to obtain individuals able to fill them from New York and other large cities like Philadelphia, Chicago and Boston. In order to carry on the work as effectively as possible, the society coöperates with the independent order B'nai B'rith, which has lodges distributed throughout many of the smaller towns and communities in the United States, and with the benevolent organizations and societies represented in the National Conference of Jewish charities. It has an office in New York city known as the industrial removal office, which is the center of the activities of the society. From here all applicants who desire to leave the city are sent away, provided with the necessary transportation and with the guarantee that provision will be made for them at their destination until such time as they become full fledged wage earners. Should conditions require it, it is not uncommon for the society to send the wage earner in advance and to make provision for the care of the family remaining here through the United Hebrew charities. As soon as the

society hears from its correspondent that the wage earner is in a position to care for his family, the latter is sent on and a reunion of the family accomplished.

The value of such a movement as this can not be over estimated. The United States still has possibilities for thousands and even hundreds of thousands of new immigrants. There are still vast tracts of territory unexplored and which in time will offer excellent opportunity for new settlers. Following out this thought, the organization above mentioned distributes families to points as far south as El Paso, Texas, as far west as California, and as far north as Winnipeg. In fact no section of the United States has been ignored where it is possible to obtain work, nor has the employment sought been confined to any particular trades. All classes of laborers have been sent away, both skilled and unskilled. Aside from the fact that such a scheme as this will in time remove thousands from the congested centers of the large cities, its value for the future, however, lies in the fact that with each family sent away from New York city, or from Philadelphia, or from Boston, a new nucleus has been formed for the immigrant who may come in the next ten or twenty years. At present 70 per cent of arriving Jewish immigrants remain in the city of New York. The reason for this is obvious. The man who emigrates to the United States goes by preference to that place where he has either relatives or friends, or to the destination for which in many instances relatives have provided him and his family with the necessary transportation. So far as the immigrant himself is concerned, it matters little to him whether he goes to New York or to Saginaw; what he asks is an opportunity to earn his living for himself and his family. If 70 per cent of the Jewish immigrants remain in New York city, it is because practically all of the immigrants of the last twenty years have remained here. With the new nuclei and the new foci that are being formed in all sections of the United States through the movement inaugurated by the Jewish Agricultural and Industrial Aid society, there is every likelihood that the percentage of Jewish immigrants remaining in New York will be decreased year by year. Finally, under the conditions existing in other communities, the Jews will again be able to renew the home life

which is characteristic of them. Granted the opportunity to earn a living, to live decently in the sight of men, there need be no fear of an increase of Jewish dependency. In time the seaboard cities will be but stopping places en route. In time there will be built up throughout the length and breadth of the United States, Jewish communities whose least concern and least expense will be the care of the dependent and poverty stricken in their midst.

EMERGENCY RELIEF IN GREAT DISASTERS.

BY EDWARD T. DEVINE.

[Edward T. Devine, professor of philanthropy, Columbia university; general secretary of the Charity Organization Society, and editor of *Charities*; born Union, Hardin county, Ia., May 6, 1867; graduated from Cornell college, (Iowa) 1887; fellow at the University of Pennsylvania in 1891 and 1893; served as a lecturer at the Oxford Summer school in England. He has also been staff lecturer on economics for the American Society for the Extension of University Teaching.]

Copyright 1903 by The Outlook Company

Fortunately, the need for charitable relief in American communities is comparatively rare. It is not, as it has elsewhere become, a usual feature in the life of the ordinary laborer. Abnormal immigration, industrial crises, a wasteful and unwise relief policy, and such disasters as a great city fire, the overflowing of rivers, or the destructive sweep of the tornado, have caused at times acute and even widespread distress, which has led to the adoption of emergency relief measures.

The questions arising from immigration—like those arising from the presence of a race problem in the southern states—although they are essentially relief questions in a broad sense, are not of an emergency character, and are too complex to be dealt with briefly as a part of the present article. The problem of hard times and the distress caused by industrial displacement must also be set aside for the present; although it is enumerated as one which is not to be disposed of by a consideration of such national policies as the currency, the tariff or other form of taxation, imperialism, or the management of trade unions. On the contrary, in every period of depression and unemployment there is likely to arise a need for exceptional relief; and in a progressive society in which mechanical processes are rapidly discarded to make way for better processes, such needs are likely to increase rather than diminish.

The demand for relief which is created by unwise philanthropy or lavish expenditure for public relief may likewise be passed over; although there is no doubt that a considerable part of the existing dependency is due directly to such causes.

Immigration, hard times, industrial displacement, the

congestion of population, and the race problem, are all to be considered as exceptional causes of distress, with which we shall one day know how to deal effectively. They are unlike sickness, accident, and death of the bread winner, unlike mere industrial inefficiency and moral defects, in that all of the latter can be remedied only by changes in human nature, or by the slow, if steady, advance of science; and yet all of these are but phases of the general problem of relief. Those who are to shape national and local policies must come to look upon them as parts of a general problem, to solve which clear and definite views are essential. From these we may distinguish, as less complex and baffling than many of the others, the task of dealing with exceptional emergencies—such as are caused by fire, flood, and famine. In the presence of such disasters as those at Heppner, Oregon, Armourdale, Kansas, and Martinique, there can be no doubt of the need for quick and effective assistance, and there can be no doubt of the wisdom of considering the lessons to be gained from the study of such disasters, after they are passed.

The first lesson which is written large in the experience of those who have been called upon to deal with such disasters is the folly and wastefulness of relying upon inexperienced, untrained, or incompetent agents for the distribution of relief and for the constructive work without which relief distribution may easily be productive of more harm than good. There are always at such times novel problems to be solved, but the experience of other communities under similar or analogous conditions will aid in their solution if it can be brought to bear. It may be, as at Chicago after the great fire, that the problem is primarily one of relief pending the resumption of trade and industry. It may be, as at Johnstown and at Heppner, that the problem of sanitation and public safety is equally important; or, as at Martinique, that the destruction of life is so complete that little relief is required except for the transportation of the few survivors for whom no means of livelihood remain. It may be that, as in Paterson after the fire and flood of March, 1902, and the tornado of 1903, the community as a whole remains self supporting, even though one portion is severely taxed to supply the necessities of other portions that

have especially suffered, and that as a consequence no outside relief is needed; or, on the other hand, as at Galveston after the inundation in September, 1900, and at Kansas City, Kansas, 1903, that all classes have been so uniformly stricken that outside relief is imperative; or it may be, as at East St. Louis and adjoining villages, that relief is provided in sufficient quantity from towns and cities in the immediate vicinity, although not in sufficient amount from the stricken town or city itself.

It is indispensable that there shall be a quick perception of the essential features of the existing situation in those who would lead a community and outside sympathizers to a wise conclusion in the face of impending or accomplished destruction of life and property.

When it has been decided that there is need of relief, whether in the form of money, of transportation, of labor, or of whatever form, then there should be summoned an executive, if such a one can be found, who is endowed with financial capacity, a knowledge of human nature, experience in dealing with men, and acquaintance with the peculiar and difficult problems constantly arising in the attempt to relieve suffering and distress without injury to the self respect of those who are to be aided, and without injury to their neighbors. If the problem is a large and complicated one, numerous subcommittees will be requisite and a staff of assistants. There should be searching inquiry into the claims for relief where the facts are not fully known. The bureau of inquiry inaugurated at Johnstown by Mr. Tom L. Johnson, of Cleveland, speedily became one of the most important features of the whole relief system, and upon it eventually devolved the real decision as to the persons to be aided and as to the amounts they should receive.

There should be an executive committee, whether called by that name, as in Chicago, or by some other designation, thoroughly acquainted with local conditions and in constant touch with the relief operations. Whether this committee should have the full responsibility, or should itself be responsible to a larger board or commission, will depend upon various conditions, and especially upon the extent of the area

from which donations are received. If contributions are made from distant communities, it may be advisable that there should be representatives upon the controlling body from such communities, or at least there should be as members of it citizens of sufficient reputation and standing to inspire a feeling of confidence even in the most distant places. After the Johnstown flood, a commission was appointed by state authority on which there was comparatively little local representation, and the principal responsibility in Johnstown itself, during the period of greatest need, rested upon what was known as a finance committee. Although there are advantages in an authoritative and widely representative commission, such as that which was then created, it is doubtful whether the resulting delays and the lack of familiarity with the actual situation are not fatal objections. It is certain that commissions, if made at a distance, should be influenced by the opinions of those who are on the spot. In any event, the real responsibility will naturally rest principally upon the local executive committee and its executive. The committee should lay down the principles on which aid is to be extended, and full responsibility for carrying them into effect should devolve upon the executive.

Material should be preserved for the publication of a detailed report, including a detailed financial record both of receipts and disbursements. This is not only due to contributors and to the public as a guide in future emergencies, but it is of advantage to those who are responsible for the relief measures, in order that, if criticism or controversies arise, a full statement can be made. The fire report of the Chicago Relief and Aid society and the report published in Calcutta of the Central Executive committee of the Indian Famine Charitable Relief fund of 1900 may be cited as models of most complete and elaborate reports; and, although of briefer compass, the report of the secretary of the Johnstown Flood Relief commission, the report of the Jacksonville (1901) Relief association, and the report of the Minnesota State commission for the relief of fire sufferers (September, 1894; report printed 1895) are equally explicit and valuable as sources of information.

The failure to publish similar reports, or, indeed, anything that can be properly called a report or a financial statement, is one of the just criticisms made against the American National Red Cross. This society has taken part in the relief of the sufferers from the forest fires in Michigan in 1881, from the overflow of the Mississippi river in 1882 and of the Ohio in 1883, from the Mississippi cyclone in the same year, from the overflow of the Ohio and Mississippi in 1884, from the drouth in Texas in 1886, from the Charleston earthquake in the same year, from the Mount Vernon (Illinois) cyclone in 1888, from the yellow fever epidemic in Florida in the same year, from the Johnstown disaster in 1889, from the inundation, hurricane, and tidal wave of the South Carolina coast in 1893 and 1894, and from the Galveston flood.

In connection with these various enterprises, and others in which the Red Cross has been interested, large sums of money have been contributed to the Red Cross society, but for their disbursement no suitable public accounting appears to have been made in any instance. In the pamphlets and addresses issued by the society such paragraphs as the following take the place of definite statements concerning what was actually done and what relation such action bore to the relief work of other and often more important agencies:

"The secretary brought together the women of Johnstown, bowed to the earth with sorrow and bereavement, and the most responsible were formed into committees charged with definite duties towards the homeless and distraught of the community. Through them the wants of over three thousand families—more than twenty thousand persons—were made known in writing to the Red Cross, and by it supplied; the white wagons with the red symbol fetching and carrying for the stricken people."

It is principally considerations of this kind that have led to the recent remonstrance from some of the most prominent members of the Red Cross society, and to an attempt, thus far unsuccessful, to bring about a reorganization of its management, especially on the financial side.

In times of great calamity, such as we have been considering, there are many who are ordinarily self supporting who

find themselves suddenly bereft of property, of accumulated savings, of the means of livelihood, and even of the barest necessities of life. The disaster may befall a community of high industrial standards, with few, if any, paupers or public dependents—a community in which there is little lawlessness and crime. Under such conditions, the principle of indemnity as distinct from that of charity may well have a very general application. The principle of indemnity is that of the fire insurance companies, and, in a modified form, also that of the life and accident insurance companies. It implies the reinstatement of the beneficiary as nearly as possible in the position from which he was hurled by the calamity which has befallen him. It implies that to the householder shall be given the use of a house, to the mechanic his tools, to the family its household furniture, to the laborer the opportunity of remunerative employment. For the community as a whole it means the speedy restoration of such commercial and industrial activities as have been temporarily suspended, the rebuilding of bridges, the reopening of streets, the re-establishment of banks, business houses, churches, and schools. It requires that protection shall be given to the defenseless, food and shelter to the homeless, suitable guardianship to the orphan, and, as nearly as possible, normal social and industrial conditions to all. The charitable principle takes account only of the necessities of those who apply for aid; the principle of indemnity gives greater weight to their material losses and the circumstances under which they were previously placed. It is a vital question whether the principle of indemnity might not properly have a wider application to ordinary relief than has usually been given to it, but we may be certain that the pauperizing effects supposed to result from liberal relief have not been found to follow the most generous attempts to avert completely the paralyzing and direful consequences of such disasters as we are now considering. Both in Chicago and in Johnstown hundreds of families were placed by gifts of money, or of house furniture, clothing, and tools, in a position practically as good as that which they had occupied before the fire or the flood respectively. There is ample testimony that in practically all instances good results were obtained from this policy.

In Chicago harmful consequences in the subsequent charitable history of the city have been traced to a retention of a portion of the money by those who were its custodians; and in Johnstown there was unquestionable hardship from the delay in its distribution and from the early indiscriminate grants made without knowledge of the circumstances of claimants; but in neither city were there well founded complaints of the results of discriminating and judicious disbursements in large amounts made with the avowed purpose of putting the recipients in a position to carry on their former or equally appropriate vocations.

On several occasions the usefulness in great emergencies or detachments of the standing army which have happened to be near at hand has been demonstrated. The perfect discipline and the organization constantly maintained in the army may save days at a time when even hours are of the greatest importance. The national guard of the various states might render, and in some instances—notably at East St. Louis, Illinois, 1903—has rendered, similar service. The suggestion made by Dr. F. H. Wines in the *Charities Review* for June, 1898, that soldiers are of great utility as an aid in emergency relief work, was based upon an experience in the relief of sufferers from an overflow of the Ohio river at Shawneetown, Illinois. The detail which came to his assistance on that occasion consisted of a sergeant and nine men, and their special duty was that of patrol and other similar service. Dr. Wines found that even then twenty men would have been better. Dr. Wines recommends that where any portion of the population of a given community requires the shelter of tents, a temporary canvas city provided by the state or nation should be organized and remain under control of the military authorities. By maintaining strict military discipline the inhabitants of the emergency camp at Shawneetown, slightly exceeding at one time two hundred in number, of whom two thirds were negroes, were at all times under thorough control. By the aid of the military force it became possible to provide for these refugees a care so sympathetic and paternal that it produced no pauperizing impression.

For the temporary camp in Kansas City, Kansas, tents

were supplied from the federal post at Fort Leavenworth, and for the similar but smaller camp on the Missouri side, for residents of Kansas City who had been driven from their homes by the flood, tents were supplied by the state militia; and in both cities detachments of the national guard were called upon for patrol duty. One of the principal reasons for such a military patrol is the temporary disorganization of the community. The local constabulary is likely to be demoralized and excited, and the presence of state militia gives confidence and security to people who need temporary moral support.

While soldiers may profitably be employed in the manner that has been indicated, it will not ordinarily be found advantageous to place upon them responsibility for relief or for remedial measures. Military discipline has its limitations as well as its advantages, and it would unfit the average soldier or petty officer to exercise that discriminating judgment and personal influence which are so essential in dealing with people who have suddenly lost their possessions and require aid and counsel in readjusting their affairs and regaining a foothold in the industrial system. At the earliest practicable moment the ordinary municipal authority should be established and the necessity for military patrol overcome.

At Johnstown one of the most interesting chapters in the history of the few months succeeding the flood is that which deals with the restoration of municipal borough authorities to the full exercise of their functions. In some of the boroughs affected by the flood there was left no building in which a meeting of the borough council could be held. Self constituted committees had temporarily managed police, health, and fire departments, and later such duties had been in part assumed by state authorities. Gradually, however, the adjutant general, representing the state government, sought out those who had been duly chosen to perform such duties, arranged suitable meeting places for councils and public boards, and transferred to them the duties which it had again become possible for them to perform. No legal or other controversies arose in connection with these ultra constitutional arrangements, and no act of the legislature was thought necessary to legalize what had been done in the interval during which ordinary municipal

activities were suspended, or the acts performed by the re-organized and restored municipal authorities.

One suggestion which is frequently made is that relief in emergencies should never be in money, but always in its equivalent. This suggestion is not to be adopted without consideration of the character of the proposed beneficiaries. It is probable that, so far as disbursements from public funds are concerned, the policy suggested is wise, and that provision of employment where emergency relief measures are necessary is still better than relief in kind. Instead of opening free shelters, depots for free food and for the distribution of clothing, as early as possible a reliable list should be made, based upon a knowledge of the portion of the community affected by the disaster. In Baltimore, after the recent tornado, the police, under the direction of the marshal, prepared a census of all the families residing within the storm area. When a reliable list of this kind has been prepared, applications may be compared with it and intelligent decisions reached as to the relief required.

The conclusion reached by the Johnstown Flood commission to make a distribution of money was eminently justified by the conditions that there prevailed. It was then proposed, and indeed at one time it had virtually been decided by the commission, instead of dividing the money in their hands after providing for various special needs, to establish large warehouses and fill them with clothing and other necessities of life, to be distributed as occasion might require throughout the ensuing winter. The change of plan was made because of earnest and emphatic protests from prominent citizens of Johnstown who were personally acquainted with the people for whom this scheme of relief was proposed, and who appreciated the absurdity of applying to skilled mechanics and prosperous trade people the principles which are based upon distrust either of the honesty or intelligence of ordinary applicants for relief.

One can not commend the methods of those almoners in Johnstown who, instead of placing their funds in the hands of the relief committees, passed through the streets handing ten-dollar bills to every one whom they met. The criticism, how-

ever, lies not against their use of money, but against their lack of discrimination and common sense. Many of those to whom grants of one thousand dollars and upwards were made instantly became engaged in active industry and trade, and within a few months, except for the loss of relatives, neighbors, and friends, might have looked upon their experience as a nightmare to be forgotten in the waking hours of renewed active life. It is probable that so large a sum has never before been poured into a community of equal size with so little damage to the personal character of the citizens and so complete an absence of any pauperizing or demoralizing influences. In the opinion of good judges resident in the city both before and after the flood, this is due in part to the fact that money was given, and that those who received it were left free to decide for themselves how it should be expended.

Two other considerations may be suggested. Special emergencies display in a high degree the need of local coöperation. In meeting such distress as is caused in populous communities by a tornado or a serious fire, there is a place for the activity of the chamber of commerce or merchants' association, or some other representative of the business interests of the community. The task relative to the large sums of money usually requisite can best be undertaken by some such body. Any appeal having their indorsement will be likely to meet with generous and quick response. There is a place also for the charity organization society, or bureau of charities, or provident association, or some other general agency whose officers and agents are trained in investigation and in the administration of funds. It may also be expedient, if no such general agency is in existence, to call upon the churches or upon such denominational bodies as the society of St. Vincent de Paul and the Hebrew charities. There may also be a need for children's aid societies or the representatives of orphan asylums to care for children who are left without guardianship; and there is almost always an urgent demand for physicians, for a temporary ambulance and hospital service, and for trained nurses. Often the aid rendered by volunteer private citizens is more valuable than that of any organized agency, and often the absence of organized relief makes it imperative

that private citizens shall undertake to do what is essential, whether from choice or not.

This leads to my final suggestion, which is that in the presence of even a serious disaster leaders of public opinion should attempt to preserve in the public mind a due sense of proportion. Even in the presence of urgent need at a distance, the continuing and probably equally imperative needs at hand should not be forgotten.

It is not surprising, in view of the frightful loss of life at Martinique and its proximity to our own shores, that the New York committee should have received some eighty thousand dollars more than they could disburse, in spite of an announcement by the committee that it would not take additional contributions. This was in part due to the fact that the eruption occurred in foreign territory, and that public appropriations were made both by the United States and France.

I would not be understood as discountenancing large and immediate responses to such appeals. By no means all that is given to meet special emergencies is deducted from ordinary charitable resources. There should, however, be cultivated a sane and reasonable examination of the probable need; and the citizen who gives, even with great liberality, should not on that account consider himself free from the obligation to consider also the needs of his immediate neighbor. The city, even in prosperous times, through its quick industrial changes and by the very conditions of life which it imposes, places upon some weak shoulders burdens which are not rightfully theirs, and which it is the duty—and it is an agreeable duty—of their neighbors to share.

THE BUILDING OF HOSPITALS.

BY HOLLIS W. FIELD.

[Hollis W. Field, author and editor; born Williamsburg, Mo., April 10, 1865; educated in the public schools of Missouri; began his career as a writer on the Kansas City Times, and afterwards became city editor of the San Antonio Express; removing to Chicago, he became connected with the Chicago Record, of which paper he became editorial writer and literary editor; writer of many articles for magazines and periodicals, chiefly on scientific and business topics.]

Considering the building records of the civilized world to-day, it is one of the anomalies of these first years of the twentieth century that one of the oldest institutions of man is experiencing a distinctly boom period.

More hospitals are building or in course of organization and development in proportion to their numbers than there are of any other one kindred institution in the educational or religious world. The relation of the tubercle bacillus to consumption and of the mosquito to yellow fever are the two great stimulating discoveries leading to the hospital movement of the present.

It was the hospital method that freed Havana of yellow fever after an unbroken record of 120 years' subjection to the disease. It was the same hospital method, that, under supervision of United States authorities in Manila, reduced that city's death rate to the rate credited to Washington, D. C. Soap and water, vaccine virus, fire, and mosquito netting have been the direct agencies for these accomplishments. Hospital and sanitation have come to be synonymous in their meaning to the medical profession, and to the practitioner the possibilities of careless infection are more to be considered to-day than the chances of cure to the infected.

Thus in a double sense the hospital boom is active. Under modern conditions the sufferer is put into the hospital ward for his own convenience and ease, while in many of the contagious and infectious diseases he is there for the safety of his fellow men.

Fifteen hundred years before Christ the Egyptians had hospitals for the care of the sick. Job is said to have main-

tained forty tables for male strangers and twelve for widows, the inference being that of these wayfarers there were the sick and ailing to be cared for. The history of the hospital dates back 300 years before Christ even in Europe, while in the fourteenth century there were 19,000 such places in that continent. Many of these institutions were of Roman Catholic origin, and to-day all over the world these hospitals under the care of the church are legion and wielding a tremendous influence upon the ills of both the flesh and the spirit.

Burdett quotes figures from 2,000 hospitals in the British islands having an income of \$36,500,000. In the United States are nearly twice as many institutions in that category, with an income in proportion, save as the small hospital in the small town is increasing, and thus lowering the aggregate. As an index of the British interest in the hospital funds of the islands, the queen's jubilee year in 1897 brought \$4,700,000 to the hospitals of the kingdom, while the ordinary hospital Saturday and Sunday in Liverpool may net \$115 to the 1,000 of population. As an index of the interest in the United States may be taken the tens of thousands of dollars donated every year by private individuals to the establishment of these institutions, and the hundreds of thousands that are voted by state legislatures for the establishment of new hospitals for specific diseases—especially for tuberculosis.

The number of hospitals in New York and in Chicago in proportion to the death rate of these cities is significant of the hospital's importance in the metropolitan city. New York with 140 hospitals in 1904 had 96,000 deaths inside the Greater New York boundaries, while Chicago, with 62 hospitals, had 26,311 deaths. Naturally the hospital figures much more largely in the cure of diseases than in the easement of the dying; if death be expected, the home may be the ideal place for dissolution; but if sanitary treatment for a curable ill is desired, the hospital is ideal. To the extent that the death rate may suggest the totals of the sick and maimed in those cities these figures are enlightening. Yet it is in these large centers of population in all the United States that the greatest hospital movement is felt.

Tuberculosis is the agent of the movement. The dis-

covery of the disease germ and the proof of its infectious nature have done more to force the hospital idea upon the modern world than has any other discovery of the pathologist. Out of this knowledge of this most dreaded malady the hospital method in general has received its greater momentum among the people.

Counting the 111,650 deaths from tuberculosis and apportioning the average death to every six having the disease in the United States, there were 666,354 cases of tuberculosis in this country last year, every one of which, in the judgment of the modern physician, should be segregated in some manner from the rest of the community and be led to observe and respect the laws, written and unwritten, against infection.

The latest idea in this line is the consumptive hospital that shall be erected by the state along institutional lines, involving the expenditure of hundreds of thousands of dollars, and the home hospital, which may not be more than a tent in the back yard, or a cot bed in the attic, either bed to be used winter and summer, through the sunshine and the rains.

The first hospital to be established by a state for the care of consumptives was the Muskoka cottage sanitarium at Grevenhurst, Ont., in 1897. This was for paying patients, and the result was so successful that another was established there five years later for the care of those unable to pay, the two institutions having a capacity of seventy five patients each. Since this experiment across the border, the United States has taken up the movement through its individual states until there is scarcely a geographical division in the union that is not interested in the establishment of a hospital for tuberculosis patients. New Jersey, for instance, has let the contracts for a sanitarium to cost \$225,000 exclusive of its equipment, the buildings to occupy a tract of 600 acres.

To-day in the United States and Canada there are 135 institutions distributed through the states and provinces for the care of consumptives to the number of 8,400. Almost one third of these patients are cared for in the states of New York and Pennsylvania. Fourteen of these institutions were established in 1902, twenty four in 1903, and twenty one in

1904, the growth indicating the interest that is awakening to the subject.

But if scores of the larger institutions are springing up for the consumptive, there are hundreds of individual sanitariums springing into form in the country, in the country town, and in the still more crowded city. To-day there is scarcely a case of tuberculosis in the United States which has not been brought to a realization of its infectiousness and the sufferer schooled to sanitary precautions against its spread. Somebody has said of the small sanitariums in general that a good doctor with one patient in a shanty in a pine forest makes a sanitarium that is bound to grow.

One of the proposed new experiments with the tuberculosis hospital movement is the establishment of the hospital on a community basis which shall leave the patients to live in the hospital and yet be within reach of their work or their interests, whatever they may be. The idea is especially adapted to the small town and city where, owing to the absence of a municipal water supply and modern drainage, the threat of tuberculosis may be more than normal. In such a place the establishment of a hospital, built after the best sanitary design, offers a home better than the average boarding place, in which the sufferers are under supervision and yet within reach of their work, presupposing that under modern conditions the sufferer from the disease will be discovered and admitted before he has lost vitality to the extent of disability.

The small town which only a few years ago looked upon the hospital as one of the institutions of the great city, comparing in a measure with a city prison and poorhouse, has come to look upon the hospital as a necessity for even the small community. There are hundreds of towns and cities, with from 4,500 to 7,000 population, where the hospital is looked upon to-day as one of the first institutions of the corporation. The citizen of the small town has been educated to the hospital method. He has learned that the home primarily is for well persons, just as the modern hospital is pre-eminently the home for the sick, and injured, and suffering. He has learned that treatment for the suffering may be better administered and more cheaply in the small hospital than in his home. He is

spared much of the anxiety of having the sick one in his home, where domestic work must be continued. For the mildly contagious diseases, too, the community shares the relief that comes of the segregation.

The hospital idea is every where. The hospital tent, the hospital ship, and even the hospital cruise into the arctic circle for the benefit of the tuberculous sufferer, are accepted to-day without a thought of question. It is only from the inner circle of the hospital managerial circle that one occasionally hears a murmur of disaffection.

One of these, recently recounting his experiences in the work, recalls with some bitterness that in all the category of hospital work of the country so little of system has been evolved for the common good of the institution. Among the superintendents whom he knows, for instance, he recalls a few physicians, a ward boss, an ex-newspaper reporter, a china factory hand, various clerks, and an assortment of clergymen. More business methods in an institution where business methods should pay big dividends is his cry, even to the extent of taking the hospital from the medical man and giving it over to the layman.

INSTITUTIONS FOR THE BLIND.

BY G. L. SMEAD.

[G. L. Smead, superintendent of the Ohio State school for the blind at Columbus, O., has been for years one of the leading authorities on the education of the sightless. He has devised many plans for adding to the productivity of their labor and making them self supporting in part. He has also introduced many novel methods into the school of which he is in charge and has delivered addresses and written articles telling of his theories.]

In Ohio, and I presume in other states, we have to contend against the asylum idea. Our school has been called the blind asylum from the beginning, and at the present day this name is oftenest upon the lips of the public. This may be partly due to the American tendency to give the shortest name to every thing, and then push on to pleasure or business. We have hardly time to call any thing by its full name. We designate thousands of miles of railroad by a few initials. The Ohio state university is O. S. U. A laboratory is a lab. A gymnasium is a gym. The young ladies in the co-educational schools are called co-eds. In one state university the young ladies' waiting room is the gab room. A bicycle is a bike. And the sacred name of Christmas is cut short into Xmas. What wonder then, if some should give as short a name as possible to institutions for the education of the blind and call them asylums with the A sometimes left off. But the use of the term asylum in some sections of our state, at least, signifies an ignorance of the true purpose of our schools for the blind. I have had many contentions with friends of imbecile children for their admission to our school. Even members of the legislature have urged the admission of such children. A long petition of citizens was once presented to me for the same purpose, and that too after the child had been repeatedly rejected. We have applications from paralytics and epileptics and from those too old to go to school. And, what are your terms for the admission of patients? is a question sometimes asked, as though the school were a hospital. The board of state charities counts us as proper members of the association of charities and corrections, and we, as officers, are appointed delegates to the

state and national conventions of that body. And in our code of laws we have been classed as benevolent institutions.

As American institutions for the blind, what are we then? Are we infirmaries, or asylums, or hospitals, or charitable institutions, or are we schools pure and simple? Some years ago we changed the legal title of the Ohio school, from the Ohio institution for the education of the blind to the Ohio state school for the blind. The Ohio school was founded for the instruction of the blind, and this change of title was urged by our alumni in protest against even the suggestion that it is any other than an educational institution.

The National Educational association, in Boston, recognized our schools as belonging to the educational system of the United States by giving a place upon the program to a presentation of our means and methods of education. The educational purpose of our schools is, I think, recognized by all the educators of the blind in the country. The influence of the American association of instructors of the blind is upon this side of the question. By resolution this association, in convention in Raleigh, North Carolina, in 1902, expressed the approval of that body, of a real affiliation with the National Educational association, and that in connection with that association there be a department of special education.

But how shall we exclude the principle of charity from our schools for the blind when so many extra things are being done for them? We feed them, clothe them to some extent, and supply means of instruction in literature, music, handicraft, and physical culture. We employ expensive apparatus in these different departments of education. If the educational department of our schools costs fifty dollars per capita, probably twenty dollars is for music, which is an extra in schools for the seeing; and then board and clothing, are not these so much more than the expense of seeing schools? Looking at the question from a civil point of view, not from the sentimental side, what is the object of the state in educating its youth? Good citizenship is the bulwark of the nation. She is strong in proportion to the intelligence and integrity of her citizens; and the state is to so educate her children as to make of them self reliant, worthy men and women, who shall

exalt our homes, and be an honor to our country in peace and in war. The true warrant for a free education is good citizenship. To this end the government through its officers may establish schools, appoint teachers, build school houses, furnish them, select text books, make them free to those unable to buy them, compel attendance, and tax the people for their support. All these things we are doing for our schools for the seeing; and more, we are giving in our state universities the opportunity for a college education, and for special, technical training, in great part free; and all this that our young men and young women may be fitted for a more advanced and useful citizenship in the application of science to the useful arts. These students thus trained are to be our teachers in the specialties to which they have devoted themselves, whether it be domestic science, agriculture, engineering, mining, or manufacturing. They are to be leaders to train others for useful citizenship. The equipment of our common and high schools, of our state universities, the large number of students attending them, and the lavishing of money for their support, all witness to the fact that we do not consider this expenditure a charity, but a necessity for the highest development of our citizenship.

But there are a part of our youth who are handicapped by the loss of hearing or of sight. What shall we do for them? Even in a horse race, allowance is made for a handicap, not for charity's sake, but to give an equal chance in the race. And may we not in the education of the blind do somewhat more in the way of help to an education than we do for our more fortunate seeing children, and still not call it charity? Has not a blind man a right to be a good citizen? Is he not under the same obligation to be such, as the seeing man? Shall we not give him a fair chance to enjoy that right, and to meet that responsibility? Are not these added facilities necessary to the best, universal development of our citizenship? Are not we who are more fortunate exalting our own citizenship in helping our weaker brother to be, with us, a good, responsible citizen of the best country that God has given to man?

But how shall we help our handicapped brother and sister? By supplying as well as we can the means by which his deprivation may be covered and counteracted. By putting into

his education such extra facilities as will make up to him in some measure what he lacks. We have our five or six senses given us to meet the conditions of this earthly life. What other special senses might have been given us, or will be given us in a higher state of existence, we do not know. Certain it is that there are some qualities of matter, of force and of mind which we have no special sense to perceive. We see as through a glass darkly in respect to many things that attract our curiosity. But with our present senses we know, perhaps, as many of the properties of matter, of force, and of mind as we are capable of using.

Each of the senses has its special function. They help each other, but each is confined to its own province. One sense gone, its special function is a blank in the experience of the person so lacking. But the other senses, each acting in its own sphere, may make up imperfectly for this want. Sight gone, and all qualities of matter that light gives are gone; color, form and feature, the ink printed page, beauty of pictures, of landscape, of the starry heavens, none of these can minister to the sightless person with their refining influence. Then, too, there is the difficulty, in these days of machinery, of following any profitable handicraft for a livelihood, so much depends upon sight in the use of tools and machines.

The sight is the educational sense. The student uses it in all departments of his course from kindergarten to high school and college. The printed page, methods and processes, scientific instruments, all, in our courses of study are adapted to sight. Hence special methods and apparatus adapted to the blind must be devised and employed in our schools, to meet their peculiar needs.

In all our methods and appliances we must remember that the blind can not see. A truism, you say; but do we seeing people fully take in the meaning of these commonplace words? Strangers to the blind do not always comprehend the physical fact, what are the possibilities of it, and what are the deprivations of the condition. To many, a blind child is a helpless curiosity, and they are surprised that any thing can be expected of such a person, and they wonder at the most commonplace things that the blind can do, and then fail to under-

stand the physical and mental deprivation under which the blind labor.

A blind man of my acquaintance was a guest at the home of a stranger. At retiring time his host showed him to the guest room, and, wishing to be very kind and thoughtful, taking him around the room said to him, here is the bed, here is a chair, here is the wash stand, and here is the looking glass. And those who have been familiar with the blind for many years may not fully take in the statement, the blind can not see.

The want of sight involves not only physical conditions, but also mental, moral, and spiritual energies. It influences muscle, nerve and brain. It may be a spur to mental and physical action, or more likely, it may have a depressing effect upon all energy. It may influence the sense of personal responsibility to self, to society, and to God. It will affect character for good or evil. And intelligence, independence, and character are essential elements of good citizenship.

Then too there are in some cases evil home influences and conditions which may be the cause of blindness, and the cause too of the most baleful influence of the affliction. If a blind child inherits bad habits and propensities, and also the disease that made him blind, he is doubly afflicted, and the problem of helping him out of his evil condition is a complicated one.

To make good citizens of the worthy and virtuous may not be so difficult, but to do this for the low and vicious may seem a hopeless task, when the inspiration of sight is lacking. Yet we are not to despair even of these. We must lay hold of the good in the heart, if we can find it, and by it raise the soul to a better and purer life. Our blind pupils are with each other in our schools only for a time; then they go out among the seeing with whom they are to spend their lives; hence we must prepare them for the world in which they are to live.

In educating our pupils for society and for the state we should have regard to three lines of training: physical, mental and moral; and these lines of education will act and react upon each other.

I will not go over the whole curriculum of our schools, but will touch only upon some special matters that are of impor-

tance in our work, in order to justify the claim that our schools for the blind are educational institutions.

Physical training is necessary to the highest efficiency in all education for the seeing, much more for the blind. Blind children are apt to form habits of sitting, standing and moving that need correcting; and with many of them there is an indisposition to exertion, for lack of motive to overcome the difficulties incident to blindness. Hence they need special training to correct unsightly habits, and to arouse to activity.

Physical training will have two forms, manual training and gymnastics. Manual training has for its object instruction and practice in the use of tools. Gymnastics is concerned with correct posture and motion, with energetic exercise for the development of muscle.

Physical training has to do with health and strength of body, with the efficient use of all its powers and their application to useful purposes.

Physical training has also in it discipline of mind. It gives alertness and quickness to the power of attention. It trains the will to prompt action, and fosters the voluntary putting forth of effort, so necessary to any success in life. In short, physical training ought to have this ultimate result, the unifying of body and mind, with the body the efficient servant of the mind. This is especially needful for the blind; for sometimes it seems that their bodies and minds lack harmony of action, as though they did not belong to each other. Physical training for the blind is important because it tends to correct improper physical habits, and to arouse them from the inertia so characteristic of many blind persons.

Mental training is the main object of all education. We might say that education has three objects: first to know something, second to do something, third to have the disposition to do something; and that something may be physical, mental, or moral. The principles of education are the same for the blind as for the seeing, but the methods in some particulars are different.

Language training should receive special attention in the education of the blind. The power of expression is a source of pleasure and profit to the blind. The communication of

thought by speech takes the place in some measure of sight. If the educated blind man can not see the form and features of his friend, he can by exchanging thought in conversation enjoy the more interesting, inner life of his friend, and he calls this seeing his friend. Much of the enjoyment of life is in the intelligent conversation of congenial minds, and the blind are not shut out from this means of happiness.

Then too there is the expression of thought in written language, and in public speech. Instruction in correct speaking and writing should be a specialty in our education. Equal in importance to the power of expression in good language is the ability to readily understand what is written or spoken, to grasp the spoken thought quickly and retain it permanently. The multiplication of text books in raised print of late years is a valuable addition to our means of education. They relieve the teacher of some work and add to his efficiency. But it would be a mistake to depend too much upon the raised printed page. Such is the expense of raised printing, that we find it difficult to keep up with the times in text books, and pupils will not get the best results if depending upon books alone. Also we grade scholars according to scholarship and not according to ability to read raised print; especially in the higher grades there will be a great difference in this respect. Hence oral instruction should have a prominent place in schools. Such teaching gives to the blind pupil the needed stimulus and training for acquiring knowledge. The enthusiastic teacher can impart his own enthusiasm to his class by the spoken description, by holding up before the students in all their meanings and bearings the principles and rules of the science which he is teaching. So much must be imparted by oral instruction in the literary department, in music, and in teaching handicraft, that it is of the utmost importance that pupils from the beginning and progressively be trained to seize at once upon the spoken thought. Much of the pleasure and profit in after life will come to pupils from being good listeners. Upon this ability will depend the pleasure and profit which they will derive from music, conversation, sermons, lectures, and speeches, in after life.

Usually the most influential citizens are those who can

talk and listen well in private and in public. Political influence consists very much in the exchange of thought between man and man. Good moral influence is exerted in the same way. Blind men and women are not deprived of this privilege of good citizenship by their affliction, provided they are prepared for it by training and intelligence. Every available means should be employed to secure the correct use of language and the ready and efficient attention to what is spoken. Oral reading, oral instruction in the class room for the power of attention; and topical recitation, written composition, and public speaking for the power of expression, all will be useful for the purpose proposed. While oral reading is very valuable for our pupils it should not be overdone. Too much inattentive listening will defeat the object which we have in view. It is well for the scholar to practice out of class the slower, more thoughtful reading of raised print books, of which we have now such a great variety. It has been suggested that in the schools we read too much orally and do not enough throw the pupils upon their own resources in reading for themselves. It may be so to some extent. Excessive reading to the pupils may dissipate the power of attention instead of increasing it. There is reason in all things. A just balance of means and methods will conduce to the highest efficiency.

With the study of the English language there should be with the advanced pupils the study of some other language; either Latin, from which so many of our words are derived, and the study of whose structure is such a valuable discipline, or some modern language, or both, if possible, as the German or French for their practical value, and for the training they give in the thinking of other peoples.

All the studies of the school curriculum are as valuable for the blind as for the seeing, but each may have its peculiar adaptation to the blind. The study of geography, for it appeals to the blind child in his isolation and fixedness of place to lead him out into a comprehension of a larger place than his little, narrow, contracted world. The study of history is a pleasure to the bright, blind student. In this study he comes to realize that there are other people in the world besides him-

self and his immediate friends, an idea that does not always penetrate the mind of the blind child till he meets some of the rough knocks of life in school and out of school.

The study of the sciences by the blind presents some difficulties, inasmuch as the processes and apparatus appeal to the sight. Yet the relief models of physiology, working models of machinery, and machines themselves are tangible, and will give some valuable idea of the forces of nature as applied to machinery.

A former pupil of ours went to the St. Louis exposition. He said that on his first visit all was confusion to him. But a friend made for him a model of the grounds and the position of the buildings. Then the general effect of the exposition was clear to him. He could not fill in all the details, but so much of the great exhibition was a great pleasure. Now this man was prepared for this enjoyment by long experience and study, as a blind man, in school and out. He had trained himself to look outside of himself into the world around him. At one time he gave in our school a very acceptable lecture upon the subject of Birds.

The study of mathematics is a difficult one to the average blind student because so much depends upon mental operations, and so little help can be obtained from written calculations. Yet the science is valuable to the blind inasmuch as it leads them out from mere memorizing into independent thought.

Mental science, moral science, and logic, for the more advanced pupils will give opportunity for introspection, counteracted by the application of thought and mind to practical duty and obligation, and also to the orderly arrangement of mental processes leading to right conclusions from the conditions and circumstances which may enter into their experience.

I would bespeak for our blind pupils as varied and extensive a training as time and ability will admit, that they may be prepared for emergencies that may come to them in after life. We never know to what use we may put our knowledge and ability till some necessity obliges us to exert ourselves according to what we know and can do. Scholars in our

schools ask the old, old question, Of what use will this study or that study be to me? To some it seems a waste of time and effort to pursue a study which has no immediate prospect of a money remuneration, forgetting that it is not altogether knowledge that is at a premium in the world. It is not primarily, How much do you know? but what can you do? Knowing and doing should go together, but knowing without doing has little market value in the world.

It is difficult to find remunerative employment for the blind; so few avenues are open to them, and we can teach so few handicrafts and professions in our institutions. But can not some of the blind, if trained to think and to reach out by effort into the world around them, find some special, unusual means of livelihood, and engage in some business or profession which we can not teach in our schools, but which their quickened apprehension finds adapted to their own special ability?

Music is the specialty of the blind. To it they look for a livelihood, either as teachers or performers, or to its allied industry, piano tuning and repairing. But the divine art should be considered more than a mere commercial commodity. One of the greatest deprivations of the blind is the lack of appreciation of beauty as it appeals to the eye. The beauty of form and feature, of painting and sculpture, of landscape with its ennobling grandeur of hills and valleys, of mountains which pierce the skies, of the broad expanse of plain and hill and dale as seen from some lofty peak, of the starry heavens, God's marvelous wonders, of the moon shining upon the glistening snow of winter—all these are lost to the person blind from birth.

Music is the fine art of the blind, the substitute for all that the eye can perceive of beauty; and as a substitute it ought to call out the more refined sentiments of the soul. This higher development of mind is specially needed by the blind to call them out of themselves into the more lofty realm of unselfish feeling and thought up to an enjoyment not found in the lower application of the art to mere commercial value.

We know that many will fail of this higher attainment, even though creditable performers upon instruments. But many, multitudes of seeing people, fail to perceive the beauty

of art as it appeals to sight, fail of the uplifting power of painting and sculpture and architecture, and of the beauties of nature; no wonder then, if some of our musicians fail of receiving the full, refining, exalting influence of their art. Yet it is worth while always to train for the highest, even for the sake of the few that reach it. There is no loss in the expression of aspiration for the highest and noblest in thought and feeling and purpose. Music in its supreme result is the expression of the loftiest sentiments of the soul, and has in it the reaching up toward that which is heavenly and divine.

PROVISION FOR THE INSANE.

BY WILLIAM M. EDWARDS.

[William M. Edwards, medical superintendent of the Michigan asylum for the insane, is one of the most prominent alienists of Michigan, and by his research and the published results of his investigations has gained a fame throughout the nation among those who are interested in the care of the insane. He has made a special study of the history of the development of the modern asylum for the care of this class of defectives.]

In the earlier history of hospitals for the care of the insane in any state, conditions in many respects were materially different from what they became after a lapse of thirty, fifty or more years. In making provision for insane people it seems to have taken a long time for legislators and citizens generally to grasp the magnitude of the problem with which they had to deal. In Michigan the first attempt was the establishment of an asylum for the care of deaf and dumb, blind and insane, and well informed men seriously thought that one principal building would afford room for these classes for many years. Happily this triple alliance was dissolved before any insane persons were received, and a separate hospital for the care of that class established and completed ready for the reception of its first patient in 1859. When a second state hospital was proposed in 1876, violent opposition was encountered and even the chief executive of the state doubted the expediency and wisdom of establishing such an institution, giving as his chief reason that he did not believe there ever would be a sufficient number of persons in Michigan to make a second hospital at all necessary. In less than twenty five years from that time there were five state asylums. The newer states have perhaps profited by the mistakes made in the older ones, so that they have not repeated earlier blunders. In all newer asylums, particularly in the earlier histories of individual states, the character of the malady treated seems to have been different from that prevailing at present. A greater number of acute conditions were received, patients recovered from a first attack and insanity was commonly believed to be one of the most curable diseases until Dr. Pliny Earl, of Northampton, Mass., first showed the fallacy

of this idea in his book on the Curability of the Insane. There is to-day such a broadening in the application of the term insanity that it includes many people that a generation ago would not have been considered appropriate candidates for admission to hospitals of this kind. The very general abolition of mechanical restraint, the change of methods of care and treatment, the establishment of training classes and in a word, the hospitalization of asylums has begotten in the public mind a confidence in them that did not exist twenty five years ago. In any hospital of the ordinary type that has been established a quarter of a century or more we shall find to-day, besides a large accumulation of chronic insane, that the admission of old, feeble or paralyzed persons prevails to such a degree that less than 25 per cent of those entered in a given period may be considered curable. Formerly the recovery rate was greater than we are able to attain at present and such admissions account in part for this. Another factor causing this earlier excess was the recovery of periodical cases and their temporary departure only to return again sooner or later for further treatment.

The management and medical officers of our hospitals have been freely criticised in the past for not effecting a greater number of cures or for not doing more for the relief of patients. The neurologist has had many suggestions to offer us, the gynecologist has criticised freely and pronounced us derelict in duty because we did not remove the ovaries of our women patients, the surgeon would have had us trephine the skull of every epileptic or operate on him in some other manner. The fad-dist and quack are always ready with some suggestion of a cure-all and even the layman thinks he can see many opportunities for improvement in the care and treatment of the insane. Intelligent criticism and suggestion are most gladly welcomed, but fault finding per se, advocacy of change and mere theories, without suggestion as to improvement, avail but little in solving the very important question involved in caring for defective or dependent people. I am sure that I can say, without fear of successful challenge, that no class of public workers are more earnestly and intelligently interested in obtaining that which shall benefit their charges than are those administering our

hospitals for the insane throughout the country. This is well illustrated in the constant effort made by boards of control and superintendents to improve the conditions under which the insane live and to afford every possible means for treatment with a view to their restoration to normal conditions or to such improvement as shall render them to a degree at least useful members of society or to place them in condition to obtain the greatest comfort in life while residents of the asylums.

We long since determined that the reception and care of acute cases in the general ward of the asylum, given over to its more or less chronic inhabitants, was wrong in principle and detrimental to the interests of the curable case. The ideal surrounding for an acute case would probably be exclusive association with normal minds, but this condition is unattainable for the insane person supported at public expense. One of the efforts to meet the requirements of acute cases was to establish separate asylums for the acute and chronic insane. The state of New York made such provision for the separation of cases by special asylums, but long since this theory was abandoned. Pennsylvania maintains one institution for chronic cases, but so far as I am able to learn, this is merely an asylum for the able-bodied working class, the frail, feeble, chronic patients having no part in it. Wisconsin has perhaps accomplished more effectively separation by the establishment of its hospitals at Mendota and Winnebago for the recent patients and the care of its more permanent cases in the several county institutions. Even here acute cases find their way into the county asylums, and as the theory upon which they are founded is custodial care these cases are deprived of the care, attention, nursing and medical treatment that their condition demands they should receive. In one state an effort was once made to establish the medical condition of the patient by legal enactment, and it was declared that at the end of two years of asylum treatment patients were to be considered chronic and incurable and were to be transferred to special places provided for their cheaper care. In Indiana, congestion in state hospitals is relieved from time to time by returning to the county poorhouses from the oldest state asylum patients who are supposed to be incurable and to require only custodial care.

That these cases degenerate in the county institutions without medical oversight and their condition becomes deplorable in a short time, has not yet impressed itself so forcibly upon the minds of the citizens of that state as to make a change in method.

In no instance do I think we have attained perfection in our care of the insane. I hope that we never shall so feel, for as soon as we come to that conclusion, decay of the worst kind will supervene. In the administration of this great charity, as in any other undertaking, we can not stand still. We must either progress or we will retrograde; and if the latter condition obtains, retrogression will be rapid. In the care of insane in state hospitals at public expense there always must be a compromise between the patient and the taxpayer. The aggregate cost in any given state of maintaining patients is very great, so that constantly we are constrained to exercise great economy. Like the politician we can not always obtain what we desire and must be content with what we can get. That the burden of caring for the insane weighs heavily finds expression in the many attempts to lighten it.

The public, however, is becoming more and more alive to the conditions surrounding the insane and the quality of care afforded them. A man eminent in their care once estimated that only two per cent of our population is interested in asylums. This two per cent includes primarily the relatives and friends of the patients; secondarily, the members of the boards of control, officers and employes of the institutions, philanthropists and perhaps a few others. The relatives of an insane person are acutely alive only to the interests of their own friend. This we see manifested in the very often expressed wish that a patient when brought to the hospital be placed in special surroundings, that he must not be put with insane people, because he is only a little depressed or disturbed, that he must be kept away from those whose behavior is of a distressing or revolting character. In other words, whatever the provision made by the state, the individual when the question is brought home to him demands a special arrangement for his friend. We all recognize the undesirability of placing the acute, depressed, hypersensitive or apprehensive patient in a

large ward for the treatment of general cases, bringing him into contact with a body of insane people for perhaps the first time. We have sought to create different conditions under which such cases shall be received and treated. Within a few years past there has been a strong tendency to break away from old methods and ideals and to establish new conditions for the reception and first care of the recent, presumably curable or borderland cases. Germany has been to a very large extent the pioneer in this work. We owe not a little to German investigators, prominent among whom are Kraepelin, Wernicke and Ziehen, for their studies of mental diseases and the practical ideas they have suggested. The teaching of psychiatry in the medical schools of Germany seems far ahead of that in the United States. In a number of German cities wards in general hospitals are set apart for psychiatric purposes, but serve largely only as detention pavilions. From such wards clinical material is taken to illustrate medical lectures. There are to-day eight psychopathic hospitals in Germany. They are located at Heidelberg, Strassburg, Leipsic, Halle, Freiburg, Wurtzburg, Giessen and Kiel. At Heidelberg most of Kraepelin's work has been done. Here is a small hospital having beds for only twenty five cases. Patients are voluntarily committed to the psychopathic hospitals or remanded by city magistrate pending examination. A formal insanity certificate is only executed in transferring cases from these hospitals to large state asylums. One of the earliest attempts in this country to care for the insane outside of the general asylums was at Albany, New York, where a ward was connected with the general city hospital for the reception of such cases. Into this ward were taken psychopaths and neuropaths, borderland cases, the acute conditions of the least pronounced type; and many of them recovered without the necessity of being formally adjudged insane. Notwithstanding the advances that have been made in psychiatry we can not deny that the friends of the patients shrink from the notoriety of having a relative adjudged insane and committed to a hospital. So jealous are we of our constitutional right that no person shall be deprived of his liberty except by due process of law, that adjudication of insanity is still necessary in the great majority of cases. There are, however, a considerable number

of borderland conditions, earlier manifestations and lighter forms of mental disease that may be admitted to psychopathic or other hospitals for treatment without the ordinary *inquirendo de lunatico*. Referring later to the subject of psychopathic or special hospitals, we now may well ask what may constitute an ideal state hospital for the care of the insane?

In framing an answer to the question there are a number of points that we shall all hold in common. Undoubtedly there will be others upon which each will have his own idea or theory and these may be somewhat at variance. I think we may fairly assume that we all agree upon the necessity for some sort of special provision for the separation of the acute from the chronic cases in every asylum that has five hundred or more patients. Of the various hospitals for the care of insane that I have visited, some stand out more prominently as being worthy of imitation than others. Among those that have especially appealed to me were the institutions at Woodilee and Gartloch, a few miles outside the city of Glasgow, Scotland, and serving the parish of Glasgow, with its approximately million inhabitants. The older one, at Woodilee, having something more than nine hundred patients, comprises a central or administration building with wings on either side and some detached buildings. These latter are especially worthy of note. One is a reception house which has been in use now a little more than two years. It is entirely separated from all other asylum buildings and into it since it was opened every newly admitted case, without exception, has been received. It consists of two roomy wards and six bedrooms and can accommodate twenty patients, ten of each sex. The two wings are divided by the kitchen, nurses' quarters and the serving department. The arrangement is devoid of any asylum features, being identical in all respects with those of a small hospital. The patients' quarters are one story only; there are no means of secluding patients; all the windows open on verandas or to the ground and can easily be used as a means of egress. The doors are not locked. The entire nursing force is women, under the charge of a specially trained nurse. Every patient on admission is treated in this house and the length of residence depends on the mental condition. It was feared by Dr. Hamil-

ton Marr, the superintendent, that there would be some difficulty in retaining the services of good nurses to care for men patients. This is what he said some time ago on the subject:

"Hitherto, these fears have been groundless and in all one hundred and seventy two patients of both sexes have been admitted since the opening. The nurses in the reception house possess all the qualifications for good nursing and have every opportunity of exercising these qualifications. When a vacancy occurs in the nursing staff, which is rare, there is not a nurse in the asylum but is desirous of filling the post and my experience in this respect extends to the most sensitive and refined of the nurses. One or two nurses, if necessary, have the special duty of nursing any unusually excited or restless patient. These nurses are relieved in a short time by others if their work is unduly arduous. A serious objection that has been urged in connection with the nursing of newly admitted men patients by women is the frequent occurrence in insanity of sexual aberration, often of a shocking kind and the use of profane language or worse. That such cases may come under observation I am fully alive to. That such cases have not arisen may, I think, reasonably be attributed to the new conditions under which the patients are placed. The quietness, cleanliness and general appearance of a small ward differing in no respect from a medical ward in a general hospital and the refining influence of women nurses have, I have no hesitation in stating, a restraining influence on the insane tendencies in the patients who are not absolutely delirious."

At the Woodilee asylum, besides this building for acute cases is a sanitarium for tubercular cases, opened on Christmas day, 1902. A large nurses' home completed late in 1903 has accommodations for 110 nurses. A large well planned laboratory building, detached from other buildings, was under process of construction. Fourteen houses for married attendants and artisans were being built by contract when I visited this asylum. When completed there will be forty seven houses on this asylum estate available for employes.

The sister institution, the Gartlock asylum, received its first patient on the 8th of December, 1896. It was built for 570 patients on an estate of 344 acres and had cost, four years

after it was opened, when it was finished in nearly every detail, inside and out, approximately two thousand dollars for each bed. This institution is designed as two separate departments, a hospital and an asylum. The hospital receives all the new cases and in its wards are also treated the acute bodily sick and the old and infirm cases. As patients are seen not to require special observation or treatment they are sent to the asylum wards and many cases of short duration are discharged after hospital treatment only. Among the features is the arrangement for the admission of patients. At the entrance of the hospital building are suites of reception rooms for each sex. First a small room furnished as a medical consulting room where each patient on his arrival is received by a medical officer and where every convenience is provided for taking notes of such information as can be furnished by those who accompany the patient as to the nature and history of the case. After the interview with the medical officer the patient is taken into an adjoining room to be bathed, and makes the acquaintance of the nurses and attendants before seeing any of the other patients or any thing especially of an asylum character. After the bath the patient then goes to the next which is a bed room, is put comfortably to bed and is given a careful examination by the medical officer who gives such directions as to the future treatment as seems most desirable. This arrangement has a double object in that it gives opportunity to the medical officer to make a complete examination of each patient immediately after his arrival and it also impresses upon the patient from the first a feeling that he will be kindly and skillfully treated; and it avoids the unfavorable impressions made by the entrance at once into a large ward. Consideration shown to the patient in this first stage has its desirable effect upon the minds of the nurses and attendants and helps to give a desirable tone at all times to their mode of dealing with patients. Women are employed as nurses in the wards for sick men. Each ward is during the day under the charge of a specially trained nurse and three women attendants, and the care of the sick men is thus assimilated to that of a general hospital. The presence of these nurses has a good and humanizing influence,

the care of the patients is more efficient and the wards are kept with greater neatness and taste.

The Michigan asylum for the insane located at Kalamazoo is the oldest state institution of its kind in Michigan. It has 1,640 patients. Its original building, having 720 feet front, was constructed on the corridor type. When in 1870 an enlargement became necessary, representatives of other communities desiring a state institution for their own towns succeeded in having a provision attached to the bill appropriating money for this extension, that none of it should be expended for the construction of any building within forty rods of the then existing asylum building. To comply with this, forty rods were measured and a second large building of 540 feet front was erected, which has since that date formed the main department for men. In 1885-86 a further extension of asylum accommodations at Kalamazoo was made in departing from the previously recognized type of construction by the establishment of two colonies. The first colony comprises a farm of 276 acres located two and one half miles from the parent institution. It was soon converted into a milk farm, a very large dairy barn was constructed, and one house erected having accommodations for 47 men patients. No additional houses have been built at this place, known as the Brook farm. The second colony, established in 1886, is located three miles in an opposite direction from the Brook farm, and has always been designated as the colony. Here are four large brick houses having room for 263 patients. One of these houses is occupied by men and three by women, and in addition there is a physician's residence and barns, stables, pig-pens, chicken houses and all necessary outbuildings that are ordinarily found upon a farm of 357 acres. In the administration of the asylum the chronic, quiet working class of patients who can be entrusted with a considerable degree of liberty are transferred to colonies. There is no difficulty in finding sufficient occupation for men in ordinary farm and garden work and in the dairy. Women are engaged in various household duties. Under the direction of a cook at each cottage they prepare their own meals, do their laundry work, and in fact are employed much as they would be in their own homes. When this colony reached its

present capacity the question of transportation became an important one in its administration. Supplies and passengers are now carried back and forth by team. For some time past it has been the intent to establish connection between this colony and the parent institution by means of an electric railway. Appropriation has not yet been made for this and hence the colony has not been enlarged. It may be mentioned that for twelve years the milk from the Brook farm has been delivered twice each day to the original asylum with a team driven by patients. One man has done most of this work. His routine has been broken into on one occasion by a week's visit to the Pan-American exposition and again by a similar outing to the exposition at St. Louis. It will thus be seen that the chronic, able-bodied patients at the Michigan asylum are to a considerable extent cared for in colonies.

In 1898 was opened a hospital for acute cases among women. It has accommodations for 52 patients. The general principle upon which it is arranged, furnished and managed is that of a small sanitarium. Into this building is taken nearly every woman that is admitted to the institution. The only exceptions are pronounced epileptic insanities and some of the extreme senile and post-hemiplegic cases. Every facility is provided for the scientific care and treatment of cases. Patients are placed in bed and strongly impressed with the idea that they have entered a hospital, that they are sick, and the object to be attained is their recovery. Each woman is put to bed in a room by herself, is given the attention of one or more nurses, if required, by both day and night. The object of placing patients in bed is primarily to impress upon them the fact that they have come to a hospital for treatment, that they are sick or distressed in mind or body or both and are in need of care and attention. The influence of this special hospitalization has a marked effect for good upon the nurses. Patients are kept in bed so long as their condition seems to require. Depending upon their physical and mental condition, they may be allowed within a few days or a week to be up and dressed, about the wards or out of doors. Many patients, however, are kept in bed for several weeks. If this is the case after the expiration of two or three weeks, systematic massage is

applied to take the place of more active physical exercises in those who are frail physically. The patients who can do so are allowed to be up a part of each day and are given exercise in the open air whenever the weather will permit. Provision is made for the special treatment of those diseases incident to women alone and for surgical interference in all cases where it seems to be required. Surgical operations are not done to cure insanity but to relieve conditions of the female generative apparatus that may be sources of annoyance, irritation or distress to the patient, and such conditions as would be relieved by an operation in the surgical division of an ordinary hospital for women who are not insane. The use of water in various forms is largely employed to tranquilize excited conditions, secure rest and sleep, as it is found by experience that this is in many cases equally or more effective than drugs and certainly less objectionable in its after effects. The wet sheet pack, properly applied under the supervision of a physician and in the hands of a skilled nurse, is useful in restraining restless, uneasy patients who might otherwise exhaust themselves. Electricity is employed to a considerable extent, the static form having preference. In some cases it undoubtedly does good and in others it is valuable as a means of suggestion. Food is prepared in a special diet kitchen, and there is not the slightest restraint upon the physician in charge in the matter of supplying any article of diet prepared in any way that in his judgment may contribute to the comfort or welfare of his patients. The hospitals are used by the physicians and superintendent of nurses as placed for demonstration to the members of the training school of the methods of care and treatment of cases. Many patients recover after a residence in the hospital building only, and go home without having resided at all upon a general ward of the institution. Others, as their cases are shown to be of the chronic or incurable type, are transferred to the wards or colony and placed among patients whose conditions are similar to their own. At rare intervals, a periodical case of the maniacal type becomes so violent and noisy at this hospital building that she is transferred to a ward intended in the original construction of the institution for the care of this type.

The hospital, without any effort to produce such a sentiment, has achieved a pleasant reputation. In the preliminary arrangements for the admission of patients or when they are brought to us, it is almost always requested by their friends or by them that they be admitted to the hospital and not to the asylum. The law of Michigan permits voluntary admissions of those who are nervous and in need of hospital care, but not actually insane, and specifies that such patients shall be admitted to the hospital. Treatment of cases in the hospital tends much to dispel the feeling of dread about entering an asylum, and has accomplished not a little in placing mental diseases where they belong, that is, on the same footing as any other malady with which humanity may be afflicted.

A similar building is now being finished for the care of men patients. This building has room for 77 patients and residence for 20 nurses, which will be about the number required for their care. In several features it is a distinct improvement upon the construction of the hospital for women. There is one room which will accommodate 12 of the more depressed or suicidal cases where they shall be under the constant supervision day and night of a competent nurse. There are rooms for hydriatic treatment and various baths including electric light bath; a room for massage and electrical treatment, laboratory rooms for such examinations and experimentations as are required. Altogether, it is expected that this building will meet the same needs among the men that the hospital for women has met, and be equally popular among the friends of the men patients.

The idea of caring for the insane exemplified at the Michigan asylum for the insane at Kalamazoo may be briefly described as comprising three factors:

First; hospitals for acute cases, which have been described.

Second; the asylum for the frail and feeble, the restless, uneasy and disturbed chronic cases.

Third; colonies for able bodied chronic workers.

Second; the asylum proper. The asylum proper is the residence of those who are frail and feeble physically or by reason of bodily sickness are confined to bed, and of the more restless, uneasy or disturbed chronic cases. Those who are

unsuited for treatment in the hospitals for the acute may be transferred as occasion arises to the asylum proper, and from it to the colony, as they may seem to be adapted for such residence. Many patients of the periodical types, as manic-depressive insanity in the intervals between the more active manifestations of the disease, may reside at the colony with comfort and pleasure to themselves and profit to the institution. Indications of a returning attack of disturbance will enable them to be retransferred to the asylum. Chronic cases requiring surgical care can be taken into the hospitals for the acute and given such attention as may be required, and then returned to the asylum proper or colony, as indicated.

Third, colonies: A colony located upon a farm affords a healthy, economic means of providing for the more robust, chronic insane who are able to do some work. Such patients live under more natural surroundings and are allowed a greater degree of liberty than can be given many times in a parent institution. By becoming interested in farm operations, a disposition to elope from the asylum is often entirely nullified. The insane individual usually does best that which he has previously known how to do best. Patients drawn from an agricultural community find on the farm, in the gardens and barns, healthy and congenial occupation of the kind to which they have been accustomed. The colony should be located with reference to accessibility, ease of transportation between it and the parent institution, with a view to a water supply and the disposal of sewage. The latter, however, can be taken care of by methods of distribution upon the land.

Colony houses should be constructed substantially of brick, and may accommodate according to the taste and ideas of the builders, from 20 to 75 patients each. They should have large, airy dining rooms with a reasonable proportion of day room space, and patients may sleep very largely in associated rooms or dormitories. They should be lighted by electricity and warmed by indirect radiation, using low pressure steam boilers. In colony houses for men, rooms in the basement or elsewhere must be set apart as smoking rooms, where the men, after their day's work, may congregate and enjoy games and indulge in the use of tobacco. For both men and women

shower baths are preferred to tubs for all ordinary purposes. From time to time convalescent patients are transferred to the colony for a short residence before being discharged. This serves a double purpose of giving such cases an opportunity to demonstrate their ability to live under surroundings more nearly approximating home life. The discharge to their homes from time to time of patients from the colonies removes from the minds of those remaining, a feeling that a transfer to these houses means a permanent stay in the institution. The sentiment "abandon hope all ye who enter here" must not be writ over the entrance to any portion of the modern institution for the insane.

The legislature of Michigan has established in connection with the medical school at the University of Michigan, at Ann Arbor, a psychopathic hospital having forty beds, for the care and treatment of mental and nervous cases. This hospital is erected in conjunction with the other university hospitals, and though not yet furnished nor opened, it is expected that at an early date it will be ready to receive cases from various parts of Michigan. Patients are admitted to it upon certificates of attending physicians. They may be transferred from the psychopathic hospital to the asylum of the district of which they are residents, and those under treatment in the state asylums may, if a reason arises for so doing, be sent to the psychopathic hospital for observation and treatment. It is expected to give much attention to the study of the various conditions arising in the patients who are admitted to this psychopathic hospital. Negotiations are under way to place it under the immediate care of one of the leading psychiatrists in America. It will serve not only as a place for the care and cure of psychopaths and neuropaths, but will afford most admirable facilities for the study of nervous and mental conditions by medical students, an opportunity for doing which has been sadly lacking in our American medical schools.

The arrangement outlined meets many of the requirements for a modern asylum. The small hospitals for recent cases enable such to receive special attention without coming into contact with distressing or disturbing factors inseparably connected with residence among chronic cases. The asylum

proper takes care of the demented, untidy and more disturbed permanent residents and of the physically frail and weak. The colony provides room at a minimum cost and healthy and remunerative employment for able bodied chronic or convalescent cases. While these factors are separate, they are interdependent and patients can readily be transferred from one component part to another. The whole can be readily under a head for administrative purposes, and no extra financial or commissary offices are required. The size to which such an institution can profitably grow, depends upon the executive ability of its superintendent.

IMMIGRATION AND THE PUBLIC HEALTH.

BY ALLAN McLAUGHLIN.

[Allan McLaughlin, surgeon, has made an exhaustive study of the relation of immigration to the public health, and for the purpose of his research has made thorough investigations into the diseases of immigrants, and their spread in the congested districts of the great cities. His work along this line has attracted wide attention among the medical profession, public officials and charity workers.]

Copyright 1904 by D. Appleton & Company

The popular belief that immigration constitutes a menace to the public health is not without foundation. Newspapers and magazines contain graphic accounts of the squalor and insanitary conditions of the tenement districts of our great cities. Recent newspaper reports and comments upon the remarkable spread of trachoma in the public schools of New York and other great cities add to the popular feeling of distrust, and the opinion is gaining ground everywhere that more stringent means must be devised for keeping out the undesirable class of immigrants which augments the frightfully overcrowded population of the tenement district of New York and other large cities.

In the consideration of danger to the public health from immigration, three factors must be taken into account: (1) The physique of the immigrant; (2) his destination, and (3) the presence or absence of communicable disease.

The first mentioned, the physique of the immigrant, is by far the most important factor. Good physique was much more general among immigrants a quarter of a century ago than among the immigrants of to-day. The bulk of the immigrants previous to 1880 came from the sturdy races of northern and western Europe, and not only was good physique the rule, but loathsome, communicable or contagious disease was extremely rare. The immigration from Ireland, Germany and the Scandinavian countries is insignificant to-day compared with the thousands of Slavs, Italians, Hebrews and other immigrants from southern or eastern Europe, which now crowd American-bound vessels and pour through the ports of this country in an ever increasing stream.

With the change in the racial character of immigration, most marked in the past decade, a pronounced deterioration in the general physique of the immigrants, and a much higher per cent of loathsome and dangerous disease is noticeable. Thousands of immigrants of poor physique are recorded as such by the medical inspectors at Ellis island, and a card to this effect sent to the registry clerk or immigrant inspector with the immigrant; but this mere note of physical defect carries little significance under the present law, and the vast majority of them are admitted by the immigration authorities, because it does not appear that the physical defect noted will make the immigrant a public charge. When the physical defect or poor physique is so marked that it seems to the medical inspector likely to make the immigrant a public charge, the immigrant is detained, and a certificate is made stating his disability, which certificate goes to the board of special inquiry with the detained immigrant. About two thirds of the immigrants so certified as likely to become a public charge are admitted because of the latitude allowed by the phrase, "likely to become a public charge." Under the present law, therefore, the immigrant certified as suffering from a loathsome or dangerous contagious disease, or as being idiotic or insane, is deported. The immigrant recorded as having a poor physique or other physical defect is usually admitted.

Race.	Ratio Sent to Hospital on Arrival to Total Number Landed.	Ratio Deported on Medical Certificate to Total Number Landed.	Percentage Remaining in New York.
Hebrew	1 to 90	1 to 393	70 per cent.
Italian	1 to 177	1 to 535	50 "
Slav	1 to 200	1 to 575	15 "
Irish	1 to 645	1 to 1450	33 "
Scandinavian	1 to 715	1 to 3280	18 "

Destination is scarcely less important than physique, and it is the rule that aliens of a race having a low physical standard will invariably herd together in the overcrowded insanitary tenement districts of our great cities, while the sturdy race of unskilled laborers are scattered over a wide territory, and tend to establish little homes of their own in the country or in the suburbs of manufacturing towns or cities.

The foregoing table indicates the relative physical strength

of the various races under discussion, and also the percentage of each race giving New York as their destination. Statistics of the Irish and Scandinavian races are given in this table for the purpose of comparison.

The third factor to be considered is the presence of communicable disease among immigrants. The ordinary quarantinable diseases are eliminated from the question by efficient quarantine methods, but certain communicable maladies, classed as loathsome or dangerous contagious diseases, exist among immigrants, and constant vigilance and considerable skill are necessary on the part of medical inspectors of immigrants to detect these cases and separate them from the healthy immigrants.

The most important of these diseases, because of its frequency, is trachoma. Of the total number of cases of loathsome or dangerous contagious disease found in immigrants, 87 per cent are due to trachoma and 10 per cent to favus.

Several years ago the prevalence of trachoma in the poorer districts of our large cities, and particularly among the foreign born population, caused numerous requests from medical men engaged in eye work in various parts of the United States that trachoma be placed in the list of excluded affections. This was done in 1897, with the result that a great many suffering with the disease were taken from among the steerage immigrants and deported. It was then discovered that ordinary steerage aliens suffering from trachoma were being transferred to the cabin, while en route, or after being refused passage in the steerage at the port of departure, would be sold a cabin passage, with the assurance that cabin passengers were not inspected at the port of arrival. To check this practice and to make the inspection of aliens complete, an inspection of cabin passengers was instituted in the fall of 1898. The cabin inspection has been very successful in preventing evasion of the law, but many steamship companies were still apparently careless of the diseased condition of immigrants to whom they sold tickets. By the last immigration law (1903) a penalty of \$100 is imposed upon the steamship company for each diseased alien brought to our ports, provided the disease evidently existed at the time of the immigrant's taking passage, and

could have been detected by ordinary medical skill. This penalty has had a salutary effect in causing the steamship companies to institute a more rigid medical inspection at the European ports of departure. Formerly the presence of a diseased alien in the steerage was a matter of more or less indifference to the steamship companies, as they could carry him back to Europe, if deported, and still make a profit on the price of his original passage.

Two points about trachoma have occasioned considerable discussion. These are its contagiousness and its likelihood of causing permanent injury to sight. The contagiousness of trachoma is recognized and conceded by those who have seen a sufficient number of cases of the disease to form an accurate impression. Striking examples of its contagious character can be seen any day on Ellis island. The annual conference of state and provincial boards of health, held at New Haven, October, 1902, placed trachoma in the category of diseases communicable and dangerous to the public health.

Permanent injury to sight is most likely to occur in cases where early treatment is neglected. Among immigrants with trachoma, ignorance of personal hygiene and inability to secure proper treatment make the spread of this disease alarming and the consequences to sight disastrous.

The area in Europe where trachoma is most prevalent extends from the gulf of Finland on the north to the Black sea and the Mediterranean on the south, and from Moscow and the Volga on the east to the Carpathian mountains on the west. In addition, it is prevalent in Greece and southern Italy, probably because of commercial intercourse with Syria, Egypt and the Barbary states. The first mentioned area is occupied by Finns, Lithuanians, Russians, Poles, Russian Germans and Hebrews. The statement is made in some text books that trachoma is prevalent among the Irish. Observation of immigrants shows that this statement is not true. There is less trachoma among the Irish than any other race of immigrants. The following table indicates the ratio in which this disease was found among the immigrants landed in in 1902.

Race.	Ratio of Cases of Trachoma to Number Immigrants Landed.
Syrian.....	1 to 69
Armenian.....	1 to 192
Lithuanian.....	1 to 375
Finn.....	1 to 496
Hebrew.....	1 to 539
Greek.....	1 to 667
Slav.....	1 to 758
German.....	1 to 772
Scotch.....	1 to 1,216
Magyar.....	1 to 1,348
Italians.....	1 to 2,066
Scandinavians.....	1 to 3,486
English.....	1 to 3,623
Irish.....	1 to 4,173

Favus has for several years been included in the list of excluded diseases. If the disease has existed for any length of time, it is, of course, easily detected by the loss of hair and changed character of the individual hairs and the scalp; but in cases of recent origin detection is often difficult because of shrewd efforts at concealment. The immigrants are often prepared for inspection, the tell-tale yellow crusts carefully removed and the scalp cleansed.

Tuberculosis of the lungs is rarely found among immigrants on arrival. Thousands of immigrants are examined whose poor physique suggests to the medical examiner the possible existence of tuberculosis, but out of the many thousands thus examined at Ellis island last year, only fifteen cases were certified as suffering from tuberculosis of the lungs.

This apparent freedom from tuberculosis is partly explained by the fact that tubercular diseases are notoriously diseases of the cities, while the bulk of our immigration comes from the agricultural communities and small towns. The remarkable prevalence of tuberculosis among recently landed immigrants is the effect of horrible over crowding in infected, filthy tenements by immigrants whose poor physique makes them ready prey for communicable disease. In addition to the horrible congestion of the tenements, the insufficient food and insufficient fuel and clothing, especially among immigrants from Mediterranean countries, must be considered as factors in the development of tuberculosis.

The danger to the public health from immigrants suffering from communicable disease is at present comparatively slight.

The United States public health and marine hospital service is charged by law with the medical inspection of all incoming aliens at ports of the United States. Officers of the service receive special training for their work as medical inspectors of immigrants. Ellis island, New York, is used by the service as a great school of instruction where young officers, before being detailed for immigration duty at one of the other ports of entry, are trained in the detection of the particular diseases and defects likely to be found in immigrants. Canada has always been a favorite route for undesirable immigrants wishing to evade the law, and officers of the public health and marine hospital service are stationed for immigration duty at Quebec and other Canadian ports, and at various points upon the Canadian frontier. Certain steamship lines make a regular business of carrying to Canada, for subsequent entry to the United States, aliens who have been rejected and sent back from an American port, or who manifestly belong to the excluded classes, or who have been rejected by other steamship lines who have some regard for our laws.

The officers of the public health and marine hospital service stationed at Quebec, Halifax, N. S., and St. Johns, N. B., have authority to examine only those aliens manifested as destined for the United States through Canada. Immigrants so manifested do not differ materially from immigrants ordinarily received at United States ports, and are given certificates of physical fitness which admit them to the United States through any of the border points. Thousands of immigrants evade this inspection at Quebec, Halifax, or St. Johns by being falsely manifested as destined finally to Canada. They have no certificates of inspection by United States officers at Quebec, Halifax or St. Johns, and upon attempting to cross the border are sent back to Montreal for examination.

In order to show the quality of the immigration brought by the Beaver line and other lines engaged in this nefarious business, it is only necessary to state that 50 per cent of the immigrants attempting to cross the border in 1902 were rejected, whereas the usual percentage of rejection at United States ports is only one per cent.

A regularly organized system of smuggling diseased im-

migrants across the border has been exposed by the United States immigration authorities at Montreal; and although the border inspection maintained by the United States immigration service is doing splendid work, it is impossible to guard effectively every point of over 3,000 miles of frontier. A more perfect system of exclusion is now possible, and consists of a rigid inspection of all aliens landing at Canadian ports under an effective Canadian law similar in character to our own, which has recently been enacted.

The real danger to the public health from immigration lies in that class of immigrants whose physique is much below American standards, whose employment is in the sweat shop, and whose residence is the east side tenement in New York city. The Mediterranean races, Syrians, Greeks and southern Italians, who are unused to a cold climate, and who often have insufficient clothing, also establish in their crowded quarters splendid foci for the dissemination of disease. The Hebrews, Syrians, Greeks and southern Italians, invariably crowd the most insanitary quarters of the great centers of population. And the various filthy and infected, though perhaps picturesque, foreign quarters constitute to-day the greatest existing menace to the public health.

There are many view points from which our immigrant problem may be judged. There are extremists who advocate the impossible—the complete exclusion of all immigrants, or the complete exclusion of certain races. There are other extremists who pose as humanitarians and philanthropists and who advocate an act of lunacy—removing all restrictions and admitting all the unfortunate—the lame, the halt, the blind and the morally and physically diseased—without let or hindrance. Neither of these extreme positions is tenable. The debarring of all immigrants, or the unjust discrimination against any particular race, is illogical, bigoted and un-American. On the other hand, the indiscriminate admission of a horde of diseased, defective and destitute immigrants would be a crime against the body politic which could not be justified by false pretense of humanity or a mistaken spirit of philanthropy.

The sane, logical position must fall between these two extremes. It is necessary for us to restrict and debar, if pos-

sible, all undesirable immigrants. A jealous regard for the public weal may demand measures and standards which seem to the humanitarian and philanthropist selfish and inhuman; but charity begins at home, and it is the right of Americans to exclude the undesirable and to employ whatever measures and set whatever standards may seem necessary to exclude any class which menaces the social or physical welfare of the country.

If we debar any undesirable class of immigrants under the law, we should endeavor to make the law as nearly perfect as possible and debar all undesirable classes. We debar the immigrant with trachoma, syphilis, leprosy or favus; also the insane, the epileptic and the idiotic, but we admit the immigrant with poor physique, unless it is so marked as to make him undeniably a public charge.

There should be but one standard of physique for the immigrant, no matter whether his destination be the Pennsylvania mines or the New York sweat shops. The skilled laborer should be expected to possess the same rugged physique as is now expected of the unskilled laborer. The standard should be fixed by law by comparison with other well recognized standards of physique, and should be sufficiently high to exclude all who could not beyond doubt make a living at hard manual labor. The wording of the law should be definite enough to make the medical certificate of poor physique equivalent to deportation.

This requirement of a definite physical standard in immigrants could be exacted without undue hardship of all unmarried male immigrants within certain age limits, for instance eighteen to forty five. In regard to families, comprising women, children and old men, in addition to males between the ages of eighteen and forty-five, each family should be required to have at least one member constituting its chief support who could comply with the physical requirements of the law. The law need not apply to parents coming here to join their children, provided the children had established a home here and presented evidence of ability to care properly for their parents.

If the thousands of recruits for the sweat shop army which

arrive each year could be thus checked for ten years, the present existing tenement house problem would solve itself. The terrible congestion of the tenements would be relieved; the scale of wages for the sweat shop worker would be elevated, and the general sanitary conditions of life in such districts as the lower east side, New York city, could be improved sufficiently to reduce the menace to the public health from this cause to a minimum.

CITY LIFE, CRIME AND POVERTY.

BY JOHN R. COMMONS.

[John Rogers Commons, economist; born Darke county, O., October 13, 1862; graduated from Oberlin, 1888; A. M., 1890; student Johns Hopkins, 1888-90; professor sociology Oberlin college, 1892; Indiana university, 1893-95; Syracuse university, 1895-99; expert agent Industrial commission, 1902; assistant secretary National Civic Federation, 1903; professor of sociology, University of Wisconsin. Author: *The Distribution of Wealth; Social Reform and the Church; Proportional Representation*, etc.]

Statistics are considered by many people as dry and uninteresting, and the fact that a book or article is statistical is a warning that it should not be read, or that the statistical paragraphs should be passed over for the narrative and historical parts. This is a dilettante and lazy attitude to take, and especially so in the study of social subjects, for in these subjects it is only statistics that tell us the true proportions and relative importance of our facts. The study of statistics leads us to a study of social causes and forces; and when we see that in the year 1790 three per cent of our population lived in cities, and in the year 1900 thirty three per cent lived in cities of 8,000 population and over, we are aroused to the importance of making a serious inquiry into the reasons for this growth of cities and the effects of city life on the future of democracy and the welfare of the nation. More impressive to the student of race problems becomes the inquiry when we realize that while one fifth of our entire population lives in the thirty eight cities of 100,000 population and over, two fifths of our foreign born population, one third of our native offspring of foreign parents, and only one tenth of our people of native parentage live in such cities. That is to say, the tendency of the foreign born towards great cities is four times as great, and the tendency of the children of foreign parents is three and one third times as great, as that of the colonial and older native stock.

If we present the matter in another form in order to show the full extent of foreign influence in our great cities, we find that 59 per cent of the population outside, and only 30 per cent of the population within, these cities is of native parentage, while 27 per cent of the population outside, and 65 per

cent of the population within, these cities is of foreign parentage. The census enumeration carries us back only to the parents; but if we had knowledge of the grandparents we should probably find that the immigrant element of the nineteenth century contributed a goodly portion of those set down as of native parentage.

Still more significant becomes the comparison when we take each of these cities separately.

Here it appears that the extreme is reached in the textile manufacturing city of Fall River, where but 14 per cent of the population is of native extraction, while in the two greatest cities, New York and Chicago, the proportion is 21 per cent, and the only large cities with a predominance of the native element are St. Joseph, Columbus, Indianapolis and Kansas City, with Denver equally divided. As already stated, grandparents would still further diminish the native element.

If we carry our comparison down to the 160 cities of 25,000 population we shall find that in such cities is one half of the foreign born population, and we shall also see marked differences among the races. At one extreme, three fourths of those born in Russia, mainly Jews, live in these principal cities, and at the other extreme, one fifth of the Norwegians. The other Scandinavian countries and the Welsh and Swiss have about one third; while the English and Scotch are two fifths, Germany, Austria, Bohemia and Poland, one half to three fifths, Ireland and Italy nearly two thirds.

Individual cities suggest striking comparisons. In New York the census shows 785,000 persons of German descent, a number equal to nearly one half the population of Berlin, and larger than that of any other German city, and larger even than the native element in New York (737,477). New York has nearly twice as many Irish (710,510) as Dublin, nearly as many Jews as Warsaw, half as many Italians as Rome, and 50,000 to 150,000 first and second generations from Scotland, Hungary, Poland, Austria and England. Chicago has more Germans than Dresden, one third as many Bohemians as Prague, one half as many Irish as Belfast, one half as many Scandinavians as Stockholm.

This influx of population to our cities, the most character-

istic and significant movement of the present generation, has additional significance when we classify it according to the motives of those who seek the cities, whether industrial or parasitic. The transformation from agriculture to manufactures and transportation has designated city occupations as the opportunities for quick and speculative accumulation of wealth, and in the cities the energetic, ambitious and educated classes congregate. From the farms of the American stock the sons leave a humdrum existence for the uncertain but magnificent rewards of industrialism. These become the business men, the heads of great enterprises, and the millionaires whose example hypnotizes the imagination of the farm lads throughout the land. Many of them find their level in clerical and professional occupations, but they escape the manual toil which to them is the token of subordination. These manual portions are the peculiar province of the foreign immigrant, and foreign immigration is mainly a movement from the farms of Europe to the cities of America. The high wages of the American industries and occupations which radiate from American cities are to them the magnet which fortune seeking is to the American born. The cities, too, furnish that choice of employers and that easy reliance on charitable and friendly assistance which is so necessary to the indigent laborer looking for work. Thus it is that those races of immigrants the least self reliant or forehanded, like the Irish and the Italians, seek the cities in greater proportions than those sturdy races like the Scandinavians, English, Scotch and Germans. The Jew, also, coming from the cities of Europe, seeks American cities by the very reason of his racial distaste for agriculture, and he finds there in his coreligionists the necessary assistance for a beginning in American livelihood.

At this point we gradually pass over from the industrial motives of city influx to the parasitic motives. The United Hebrew charities of New York have asserted that one fourth of the Jews of that city are applicants for charity, and the other charitable societies make similar estimates for the population at large. These estimates must certainly be exaggerated, and a careful analysis of their methods of keeping statistics will surely moderate such startling statements, but we must

accept them as the judgment of those who have the best means of knowing the conditions of poverty and pauperism in the metropolis. However exaggerated, they indicate an alarming extent of abject penury brought on by immigration, for it is mainly the immigrant and the children of the immigrant who swell the ranks of this indigent element in our great cities.

Those who are poverty stricken are not necessarily parasitic, but they occupy that intermediate stage between the industrial and the parasitic classes from which either of these classes may be recruited. If through continued poverty they become truly parasitic, then they pass over to the ranks of the criminal, the pauper, the vicious, the indolent and the vagrant, who, like the industrial class, seek the cities.

The dangerous effects of city life on immigrants and the children of immigrants cannot be too strongly emphasized. This country can absorb millions of all races from Europe and can raise them and their descendants to relatively high standards of American citizenship in so far as it can find places for them on the farms; but the cities of this country not only do not raise them but are themselves dragged down to a low level by the parasitic and dependent conditions which they foster among the immigrant element.

This fact is substantiated by a study of criminal and pauper statistics. Great caution is needed in this line of inquiry, especially since the eleventh census promulgated most erroneous inferences from the statistics compiled under its direction. It was contended by the census authorities that for each million of the foreign born population there were 1,768 prisoners; while for each million of the native born there were only 898 prisoners, thus showing a tendency to criminality of the foreign born twice as great as that of the white native born. This inference was possible through oversight of the important fact that prisoners are recruited mainly from adults, and that the proportion of foreign born adults to the foreign born population is much greater than that of the native born adults to the native population. If comparison be made of the number of male prisoners with the number of males of voting age, the proportions are materially different and more accurate.

But this analysis brings out a fact far more significant

than any yet adverted to, viz., that the native born children of immigrants show a proportion of criminality more than twice as great as that of the foreign born themselves, and nearly three times as great as that of the children of native parents.

This significant fact is further brought out, and with it the obverse of the census mistake above referred to, when we examine the census inferences respecting juvenile criminals. The census calculations show that there are 250 juvenile offenders for every million of the native born population, and only 159 such offenders for every million of the foreign born population; but if we remember that the number of foreign born children is small, and then proceed to compare the number of boys who are offenders with the number of boys of school age, rather than with the number of persons of all ages, we shall have the following results, confining our attention to the north Atlantic states, where juvenile reformatories are more liberally provided than in other sections:

MALE JUVENILE OFFENDERS

Per million of male population of school age (5-20 years) north Atlantic states: 1890. (Omitting unknown).

Native white, native parents.....	855
Native white, foreign parents.....	2,740
Foreign white	2,252
Colored	10,925

This table throws a very different light on the situation, for it shows that the tendency towards crime among juveniles, instead of being less for the foreign born than for the native born, is nearly three times as great as that of the children of American parentage, and that the tendency among native children of foreign parentage is more than three times as great as that among children of American parents.

This amazing criminality of the children of immigrants is almost wholly a product of city life, and it follows directly upon the incapacity of immigrant parents to control their children under city conditions. The boys especially, at an early age, lose respect for their parents, who cannot talk the language of the community, and who are ignorant and helpless in the whirl

of the struggle for existence, and are shut up during the day-time in shops and factories. On the streets and alleys, and in their gangs and in the schools the children evade parental discipline, and for them the home is practically nonexistent. Says a well informed student of race problems in New York: "Example after example might be given of tenement house families in which the parents—industrious peasant laborers—have found themselves disgraced by idle and vicious grown sons and daughters. Cases taken from the records of charitable societies almost at random show these facts again and again."

Far different is it with those foreigners who settle in country districts where their children are under their constant oversight and, while the youngsters are learning the ways of America, they are also held by their parents to industrious habits. Children of such immigrants become substantial citizens, while children of the same race brought up in the cities become a recruiting constituency for hoodlums, vagabonds and criminals.

The reader must have observed in the preceding statistical estimates the startling preëminence of the negro in the ranks of criminals. His proportion of prisoners for adult males seems to be five times as great as that of the native stock, and nearly twice as great as that of foreign parentage, while for boys his portion in the north Atlantic states is eleven times as great as that of the corresponding native stock, and nearly four times as great as that of foreign parentage.

The negro perhaps suffers by way of discrimination in the number of arrests and convictions compared with the whites, yet it is significant that in proportion to total numbers the negro prisoners in the northern states are nearly twice as many as in the southern states, reaching the enormous proportion of 20,000 to the million of voting age in the north Atlantic states, but standing at less than 12,000 in the southern states. Here again city life works its degenerating effects, for the northern negroes are congregated mainly in towns and cities, while the southern negroes remain in the country.

Did space permit, it would prove an interesting quest to follow the several races through the various classes of crimes,

noting the relative seriousness of their offenses, and paying attention to the female offenders. Only one class of offenses can here be noted in detail, namely, that of public intoxication. Although classed as a crime, this offense borders on pauperism and the mental diseases, and its extreme prevalence indicates that the race in question is not overcoming the degenerating effects of competition and city life. Statistics from Massachusetts seem to show that drunkenness prevails to the greatest extent in the order of preëminence among the Irish, Welsh, English and Scotch, and least among the Portuguese, Italians, Germans, Poles and Jews. The Italians owe their prominence in the lists of prisoners to their crimes of violence and very slightly to intoxication, though the latter is increasing among them. In the southern states the ravages of drink among the negroes have been so severe and accompanied with such outbreaks of violence that the policy of prohibition of the liquor traffic has been carried farther than in any other section of the country. Probably three fourths of the southern negroes live in prohibition counties; and were it not for the paternal restrictions imposed by such laws, the downward course of the negro race would doubtless have outrun considerably the speed it has actually attained.

Besides the crimes which spring from racial tendencies, there is a peculiar class of crimes springing largely from race prejudice and hatred. These are lynchings and mob violence. The United States presents the paradox of a nation where respect for law and constitutional forms has won most signal triumphs, yet where concerted violations of law have been most widespread. By a queer inversion of thought a crime committed jointly by many is not a crime, but a vindication of justice, just as a crime committed by authority of a nation is not a crime, but a virtue. Such crimes have not been continuous, but have arisen at times out of acute racial antagonisms. The Knownothing agitation of 1840 to 1855, which prevailed among religious and patriotic Americans, was directed against the newly arrived flood of immigrants from Europe and Asia, and was marked by a state of lawlessness and mob rule such as had never before existed, especially in the cities of Boston, New York, Pittsburg, Cincinnati, Louisville

and Baltimore. These subsided or changed their object under the oncoming slavery crisis, and the Civil war itself was a grand resort to violence by the south on a question of race domination. Beginning again with the Kuklux and Whitecap uprisings in the seventies, mob rule drove the negroes back to a condition of subordination, but the lawless spirit then engendered has continued to show itself in the annual lynching of one hundred to two hundred negroes suspected or convicted of the more heinous crimes. Nor has this crime of the mob been restricted to the south, but it has spread to the north, and has become almost the accepted code of procedure throughout the land wherever negroes are heinously accused. In the northern instances this mob vengeance is sometimes wreaked on the entire race, for in the north the negro is more assertive, and defends his accused brother. But in the south the mob usually stops with vengeance on the individual guilty or supposedly guilty, since the race in general is already cowed.

Other races suffer at the hands of mobs, such as the Chinese in Wyoming and California at the hands of American mine workers, Italians in Louisiana and California at the hands of citizens and laborers, Slovaks and Poles in Latimer, Pennsylvania, at the hands of a mob militia. With the rise of organized labor these race riots and militia shootings are increasing in number, and they often grow out of the efforts of older races of workmen to drive newer and backward races from their jobs, or the efforts of employers to destroy newly formed unions of these immigrant races. Many strikes are accompanied by an incipient race war where employers are endeavoring to make substitution, one race for another, of Irish, Germans, native whites, Italians, negroes, Poles, and so on. Even the long series of crimes against the Indians, to which the term "a century of dishonor" seems to have attached itself without protest, must be looked upon as the mob spirit of a superior race bent on despoiling a despised and inferior race. That the frenzied spirit of the mob, whether in strikes, panicky militia, Indian slaughter, or civil war, should so often have blackened the face of a nation sincerely dedicated to law and order is one of the penalties paid for experimenting

on a problem of political and economic equality with material marked by extreme racial inequality.

Prior to the year 1875 the laws of the United States imposed no prohibition upon the immigration of paupers from foreign countries, and not until the federal government took from the states the administration of the law in 1891 did the prohibitions of the existing law become reasonably effective. Since that year there have been annually debarred as likely to become public charges 431 to 5,812 arrivals, the latter number being debarred in the year 1903. In addition to those debarred at landing, there have been annually returned within one year after landing, 177 to 637 immigrants, who had meantime become public charges. From these statements it will be seen that, prior to 1891, it was possible and quite probable that many thousand paupers and prospective paupers were admitted by the immigration authorities, and consequently the proportion of paupers among the foreign born, as shown by the census of 1890 (the latest census covering the subject), was probably larger than that which will be shown by succeeding censuses. In the earlier years systematic arrangements were in force in foreign countries, especially Great Britain, to assist in the deportation of paupers to the United States, and therefore it is not surprising that, apart from race characteristics, there should have come to this country larger numbers of Irish paupers than those from any other nationality. The Irish in the United States, and, in a lesser degree the English and Scotch, have incurred an undeserved obloquy through their preëminence in the pauper records, because, during the period of their greatest migration, our laws had not yet been enacted and enforced for the exclusion of paupers. Taking, however, the census reports for 1890, and confining our attention to the north Atlantic states, where children are generally provided for in separate establishments, we have the following as the relative extent of pauperism among males.

Per million voting population, north Atlantic states, 1890.	
Native white, native parents.....	2,096
Native white, foreign parents.....	1,782
Foreign white.....	4,653
Colored.....	5,067

Here we see the counterpart of the estimates on crime, for the natives of foreign parentage show a smaller proportion of paupers than the natives of native parentage, while the foreign born themselves show double the relative amount of pauperism of the native element, and the colored paupers are two and one half times the native stock.

The census of 1890 also furnishes data for computations which would show the contributions of the different races and nationalities to the insane asylums and all benevolent institutions. In all cases it appears that the foreign born and the negroes exceed the native classes in their burden on the public. A state like New York suffers under this burden far beyond its just proportion, and, to take the matter of insanity, with one fourth of the population and one third of the voters foreign born, one half of the insane supported by the state of New York are foreign born. In New York city in the year 1900, of 2,936 inmates of almshouses only 564 were born in this country. When the permanent census bureau and the bureau of immigration, under authority recently granted, shall have made their reports on these important subjects, it will be possible to form more accurate judgments than the present scattered and defective statistics allow. Especially are we ignorant of the extent of outdoor pauperism, that is, the paupers who are aided in their homes and not in public or private institutions. That this exceeds the institutional element is altogether probable, and, judging from the reports of charitable associations in various cities, much the greater portion of this class of poverty and pauperism is foreign by birth. There are two reports of the department of labor of great value and significance incidentally bearing on this subject, one of them showing for the Italians in Chicago their industrial and social conditions. According to this report the average earnings of Italians in that city in 1896 were \$6.41 per week for men and \$2.11 per week for women, and the average time unemployed by the wage earning element was over seven months. In another report of the department of labor it appears that the slum population of the cities of Baltimore, Chicago, New York and Philadelphia in 1893 was unemployed three months each year. With wages one dollar a day and employment only five months during the

year, it is marvelous that the Italians of Chicago, during the late period of depression, were not thrown in great numbers upon public relief. Yet, with the strict administration of the exclusion laws, leading to the deportation of over 2,000 Italians in 1903 as liable to become public charges, it is likely that the immigrants of that race, although low in poverty and standard of living, are fairly well screened of actual paupers.

POOR RELIEF IN THE UNITED STATES.

BY EMIL MUNSTERBERG.

[Emil Munsterberg, German sociologist; is city councillor and director of poor relief in the city of Berlin; is probably the greatest authority in the world in this line; editor of the *Zeitschrift für das Armenwesen*, the organ of the *Centralstette für Arbeiterwohlfahtseinrichtungen*; Author: *Die Armenpflege, Zur Frage der Städtischen Selbstverwaltung*, etc.] Copyright 1903 by The University of Chicago

The American system of poor relief resembles that of Switzerland in the lack of unity of character. There is no national American poor law. The federal government regulates poor relief in the District of Columbia, which occupies an exceptional position; and it supervises immigration, and of late has sought to restrict the entrance of pauperized and defective persons. In time of extraordinary necessity congress may give aid. The statistical offices of the union gather information relating to public relief and private charity in all the states. In general, poor relief is an affair of the states, which they administer either directly or through the local authorities of counties or townships.

In order to understand the development of the American poor relief system, one must properly estimate the manifold conditions which have been developed in history along economic lines. The reader should, as Henderson remarks, keep before his imagination a map of the United States, and hold steadily in mind the climatic, historic, and social differences; the striking contrasts between New England, the south, the fertile plains of the middle states, the vast prairies of the west, and the elevated mountain regions and fruitful valleys and coast climate of the Pacific states. Quite as various as these conditions are the forms of public and private care of the poor; in the western states they are frequently in the first stages of evolution; in the old, the so-called New England states, they are already affected by the evils of older culture. On the other hand, it occurs that quite young cities are superior to older lands, because they have appropriated to their

use the most recent devices in this field, while other regions cling to the ancient methods.

Literary activity, in the restricted sense, is in America full of life. The writings and reports upon poor relief and charity extend to the neighboring fields of social philanthropy and to prison matters; a fact which is not entirely due to their inner relations, but goes with a situation in which the administration of prisons devolves upon related authorities. Thus Henderson, in his recent work, treats, in the second part, care of the dependents; in the third part, care of the defective and feeble minded; while in the last part he offers an introduction to criminal sociology. Henderson belongs in the ranks of those best acquainted with American poor relief, so that his book gives reliable instruction in respect to the prevalent principles of American efforts to help the dependent. The method of presentation is somewhat different from that of German works, not altogether so profound and systematic, but more pervaded by a practical purpose, with a decided intention not only to instruct, but also to inspire and to win practical helpers for the work.

A work laid out on a generous plan is entitled *American Philanthropy of the Nineteenth Century*, which was begun in the *Charities Review* of May, 1900, and which presents the views of specialists in the different branches of poor relief. The first article treats the general assumptions of social care of the poor. It explains the causes of poverty and the efforts made in America to deal with it. Here it is interesting to notice how the efforts to relieve distress are fundamentally the same in all lands, and how the same causes lead to the same observations and the same methods of help. As causes of dependence the author emphasizes ignorance, idleness, intemperance, shiftlessness, premature marriages, gambling, borrowing of pawnbrokers, and, finally, the countless benevolent agencies. An evil which we encounter in Germany is noticed by this writer—the increasing ease with which heads of families in great cities desert those dependent on them for support. He adds that it is surprising how often the deserted wife and mother manages to provide better for her family when she has no longer the man's weight on her neck. In the

following divisions the author discusses the arrangements of public relief; the so-called Quincy report of 1821 and the Yates report of 1824, for the states of Massachusetts and New York, which were the occasion of a new tendency in relief methods, and which have led to a more individual treatment, akin to that of the Elberfeld system. In particular, the tendency to employ preventive measures and to improve the working of private charities through the later charity organization societies is brought into clear light.

The American National Conference of Charities and Correction sprang from the same motives as our German Verein für Armenpflege und Wohlthatigkeit. In the autumn of 1873, at the suggestion of F. B. Sanborn, then secretary of the American Social Science association, several men came together who recognized the need of an annual conference on relief problems, and most of these persons were connected with the nine existing boards. After some correspondence, with favorable replies, the first conference was held in New York in 1874, which had representatives from four boards and written communications from four others. Not many more than one hundred persons took part in that conference, and its report filled less than fifty pages. During the succeeding years this organization has been greatly developed and has become one of the most significant factors in American charity. In 1898 the twenty fifth jubilee was celebrated in New York, the place of its origin, and the conference was welcomed by the highest state and municipal authorities. During these twenty five years the activity of the conference has kept essentially in the same course. The object of the conference is to discuss problems in the field of charity, to give instruction, and to promote reforms. This purpose is served by the annual meetings, for which preparation is made, by printed reports. The conference covers a wide field and includes a part of general social movements for betterment; and, the number of subjects being very large at each meeting, attention is not concentrated upon a few points. This is possible only by the establishment of sections, with quite special technical problems for treatment. Thus there exist eleven special committees, each of which devotes particular attention to a single branch of charity—as

public poor relief, care of neglected and deserted children, organization of charities, etc. It is characteristic of American conditions that a special committee is appointed to handle the theme of political interference with poor relief. Quite as characteristic is the custom of having a sermon from some preacher. It is intended, as the jubilee report of 1898 declares, to strengthen among all participants the fundamental idea that care of the poor and benevolence have a religious basis, and are never to be considered simply from a merely economic or philanthropic point of view. The sermons, which are printed in the reports of the conference, are free from all pious cant and ecclesiastical partisanship, and are earnest and thoughtful incentives to charitable work from a positively Christian foundation.

A very useful part of the plan is the annually repeated survey of events in the several states. In 1900 there were forty of these reports, so that only ten states and territories were not represented. In each report a brief statement is made of recent legislation and new methods. In 1898 there were thorough discussions of the laws governing immigration and settlement, the management of medical relief and its abuses, and the care of crippled and feeble minded children; and in 1899 the organization of charities, public poor relief, prison reform, and care of neglected children were the central topics. The conference of 1900 was occupied with degeneration in rural districts, with the housing problem in small cities, with care for the epileptics and feeble minded. At the conference of 1901, among other topics were the following: subsidies from public funds to private charities and their relations to each other, the activities of personal care of the poor, relief of families in their homes, when the importance of individual treatment and voluntary human devotion to the needy was warmly emphasized. In comparing the American conference with our German union, the question is forced upon our attention whether the custom there, of treating all subjects of relief each year, even if cursorily, is to be preferred to ours, in which every year only certain important subjects are selected, but these are treated with all the apparatus of literary, statistical, and practical materials. Without doubt, the American meth-

od leads to repetitions, and frequently to superficial considerations; still it must be acknowledged that certain topics must be frequently discussed in order to be noticed, and that in this way the advance gained from time to time is more distinctly exhibited.

On the whole, one receives from the poor relief and charity of the United States the impression of a living interest in the revival of personal care for the poor; more than in other lands is the social importance of a sound method emphasized. A fresh inspiration pervades the American efforts, as in their industrial and economic work they keep their eyes open in order to learn more from every direction, the best and the newest; and as they take care of themselves to search for new ways, so they have in our field appropriated all the new inventions, and, especially, in the care of the sick and defective, have made great progress.

The most important means with which to combat corruption is the creation of state boards which are intrusted with the supervision of the arrangements for poor relief. This agency is not new and has already often been employed, although it has not always fulfilled its purpose, because the members of such boards are themselves open to partisan influence. At present especial pains are taken to give an independent position to the boards and to make them nonpartisan in character, or at least bipartisan, that is, with participation of both parties.

The first board of supervision was formed in 1863 in Massachusetts, and this, in 1867, was imitated in New York and Ohio. At this time twenty five states have such boards, among which are some specialized boards for the different branches of relief. Thus of late in Massachusetts, in consequence of careful investigation of the condition of public institutions, the former board of lunacy and charity has been replaced by three bodies: the state board of charity, the state board of insanity, and the state commission of prisons; and a similar arrangement is found in New York. The boards carry different titles, among which the most common are the state board of charity and corrections, or merely board of state charities; in Iowa, board of state institutions.

The duties of a board vary widely; most limit themselves

to control of public state institutions; while some go farther and supervise also private charities, in which capacity they have authority to inspect institutions, to require reports of a uniform style, and to set aside abuses. The boards are divided with reference to methods of administration, according as they are honor offices or are conducted by paid officials. With the first kind, goes independence of partisan influences, while others can give themselves more professionally and thoroughly to their work, but are also more politically dependent.

Here belongs an interesting experiment of New York. There exists a state board of charities which essentially is conducted by unpaid officers, among whom all parties and denominations are represented. A reorganization of the board was planned by the governor, whose central principle was the replacement of the former board by a commissioner, and two state officials to be nominated by the governor; and from the reorganization he expected important economies. Against this plan almost unanimously the greater benevolent societies of New York in many assemblies declared their opposition. That an effective oversight must be provided was denied by no one. The supervising board, however, must remain free from influences which might tend to demoralize the public benevolent institutions; such a demoralization would be the result of partisan domination. On the whole, experience had shown that such arrangements, when conducted only by professional officials, not only accomplished very little, but also administered affairs in a more expensive way. If the governor, therefore, had the purpose to secure greater economy, he would in fact secure the opposite result. The saving by diminishing the number of members would be essentially a backward step in the activity of the board. The former state board has known how to maintain a strictly nonpartisan attitude, and through more than thirty years of existence has held the public confidence. A commission like the one planned would be a creature of the state administration, which would make a nonpartisan supervision impossible. In this connection it was mentioned that the members of the board who had an appropriation of over six thousand dollars for their personal expenses, had actually used only twenty five hundred dollars

Recently (1899) a board has been constituted in the District of Columbia which is subject to immediate administration of congress, after the attempt of 1898 to introduce one had failed. The opposition proceeded from a private charitable society which feared that the erection of such a board would interfere with their immediate and successful applications to congress. In 1900 a board of state aid and charities was founded in Maryland, under whose oversight were to be placed all public and private charitable institutions which received state aid; and here also the first bill at its introduction in 1898 was rejected. The Iowa state board of control, founded in 1898, is giving general satisfaction. In Indiana a legislative visiting committee was appointed in 1901 to investigate all public and private institutions so far as they receive public aid. The committee consists of three persons, of whom two belong to the house and one to the senate of the general assembly. Significant are the words of the law which declares that only such men can be members of the committee as are of approved character and business skill, and who are neither directly nor indirectly financially interested. They have regularly, at a fixed time, before a session of the legislature, to prepare plans relating to appropriations. So far as I can see, the state board of charities, which has existed since 1889, is not affected by this law; so that the committee is simply a direct parliamentary commission. The committee must be bipartisan, inasmuch as only one member of a political party can belong to it. By a law of 1899, the administration of the prisons is placed on the same basis, so that only the administration of the state penitentiary remains under political control, a fact which was mentioned with regret in the last report of the board. In California a bill relating to the establishment of a state board was approved by both houses, and yet rejected by the governor's veto.

The complaint sometimes made by German writers, that American material is difficult to obtain, seems to me unfounded. In this connection I gratefully acknowledge that the materials, including voluminous reports, were sent to me on request, free of cost, and very promptly.

A current survey of the reports of the state boards and of

new legislation is regularly published in the proceedings of the National Conference of Charities and Correction. The reports of the state boards are almost always prepared with great care, and furnish, especially on the statistical side, instructive views. The most recent report from New York (1900) declares that the continual change of officers in the poorhouses is very harmful to public welfare, and that reform of the civil service applied to this department would be an important advance. This report is remarkable both for extent and contents, although the reading of it is attended with difficulty. In not fewer than three thick volumes, and in nearly 3,000 printed pages, the entire system of the charities of New York is presented. The second half of the first part contains a great array of statistics, the second volume a complete directory of all the charitable institutions in New York, with exact statement of the purpose, the seat of administration, the officers, receipts and expenses, etc. In the same volume they have printed the legal regulations of the state board and poor laws. The year 1899 was unusually fruitful in laws on these subjects; not fewer than one hundred bills affecting poor relief directly or indirectly, were passed by the legislature; and the report remarks that some of these bills, in the judgment of the board, will be found unconstitutional. The administrative activity of the board is extended to all the public and to many private institutions, some of great importance. The evidences of careful supervision appear everywhere; a special report being rendered for each institution. Of state institutions subject to supervision, twelve were named, with a total population of 6,885 inmates and an expenditure of \$1,180,000; most of these being devoted to the care of defectives (blind, deaf mutes, feeble-minded, etc.). Of private institutions which receive state aid, ten are mentioned, with 3,228 inmates and an expenditure of \$790,000, of which \$660,000 came from public funds. Here the institutions for deaf mutes are conspicuous.

An event of very deep import must be mentioned which illustrates the danger which seriously threatens one of the most vital functions of the state board—the oversight of private charities. It has importance for the other American states and is of interest far beyond the American borders. The law

relating to the state board contains in section IV the language: "To visit and inspect any charitable, eleemosynary, or correctional institution in this state, excepting prisons, whether receiving state aid or maintained by municipalities or otherwise."

In these words the state board had regarded itself as authorized to inspect the working of all charitable arrangements. When the board desired, in 1899, to inspect the building of the Society for the Prevention of Cruelty to Children, they were refused access, on the ground that this society did not belong in the class of charitable institutions. The state board, proceeding from the belief that the society belonged in the highest sense of the word to benevolent institutions—and, by the way, it is really a very beneficent work—applied to the attorney general in order to enforce its rights. Both parties appealed from the first decision, which suited neither of them, to the court, which unanimously supported the claim of the state board. Upon this the society appealed (on some ground), and then followed a decision of Judge O'Brien to which three judges agreed and from which a minority of them dissented, to the effect that the society was not a charitable institution, was not under the supervision of the state board, and that their power extended only to such institutions as were partly or entirely supported by the state. This decision excited both anxiety and indignation in the state board and in the minds of many persons who are convinced of the necessity of rigorous state supervision. The state board gives detailed information in regard to the affair. In various places, as in the *Quarterly Record* (June, 1900) and in the *National Bulletin of Charities and Correction* (August, 1900) Homer Folks and W. R. Stewart discuss the matter thoroughly and explain the effect of the judicial decision. Stewart especially deals with the question of supervision in its historical development and theoretical and practical importance, with the help of the entire materials of the judicial decisions. The practical significance lies in the result that this declaration of the highest court must have as a consequence a complete change in the practice of the state board, and that many of the institutions which have hitherto submitted without objection to supervision must now be with-

drawn. While the board at the end of 1899 had inspected over 1,200 benevolent agencies, from this time 663 must be withdrawn because they are supported simply from private means and perform no public function. Among these are 47 asylums, 74 homes for the aged, 35 institutions for children, 63 general hospitals, etc. The very useful statistics relating to all the institutions which have been published by the board must be abandoned. The board, in whose quarterly report this discussion appears, very naturally expresses deep regret at this turn in affairs, which must result in public injury. The argument is significant, not only for the New York administration, but in relation to public supervision generally.

As a matter of fact, the effects are already noticeable in the refusal of several societies to receive inspectors. In vain the state board sought in the year past by legal means to obtain aid. One bill was introduced with the special object of requiring inspection of the society for the prevention of cruelty, and another aimed in general to extend the rights and duties of the state board to benevolent agencies which received no public subsidy, in cases where the state board had previously gained the consent of the administrators of these societies. Both these bills were defeated by the opposition of the president of the society already mentioned, while at the same time a new bill limited the right to supervise the state home for soldiers and sailors. We must join the state board and its friends in expressing the hope that the decision of the highest court may be rendered harmless by the enactment of a law which will subject all charitable agencies to control. The sound societies have no occasion to shun the light of publicity, while the corrupt can be unmasked only by this means.

In very happy contrast with the attitude of the Society for the Prevention of Cruelty is that of another great private society, the State Charities Aid association of New York, which was founded in 1872, with the object of doing all that unselfish citizens can do to improve the administration of public institutions. To Germans it seems a very unusual proceeding to organize a private society to labor for the better administration of public institutions; it is explained by the

peculiar American conditions. As a matter of fact, the influence of the society is considerable.

The poor law of the state of New York in sec. 30 grants the society particular authority to commission members to inspect all public institutions for the poor and the sick; such members must be residents of the locality of the institution. On the ground of this authorization the society, as appears in its last report, inspected the poorhouses and hospitals in forty three of the sixty one counties of the state. In addition it manifested a varied and far reaching activity. It represented many public charitable societies before state and municipal authorities, and obtained for them repeatedly help from public means. It subjected legal proposals relating to benevolent societies to careful criticism, and by energetic oral and printed discussion contributed to the acceptance of desirable measures.

Since the American relief system does not rest on a uniform law, as in England, it is left even more than in Switzerland to the legislative choice of the several states, in which, owing to the lack of a common historical development like that of Switzerland, and to the uncommonly dissimilar economic and social conditions, a very great unlikeness in the organization of poor relief is developed. The care of the poor is administered through the counties or towns or, in certain cases, immediately by the state. The organization of public poor relief on the neighborhood principle corresponds to the development in the older communities, where, as an outgrowth of the customs of the mother country, self government was an affair of local settlements, while in the territories settled by larger groups a wider community, the county, undertook the administration. There are also intermediate forms where obligation and authority are suitably divided between the local and the state corporations. This appears especially in the obligation of the county to support those poor who belong to no town. In general there is a decisive tendency to recognize the peculiar needs of the cities, and to intrust to them the care of their own poor. Yet the city administrations suffer from the same influences as those of the state, although of late, in the greater cities, a change has been introduced. New York and Boston have completely reorganized their poor-relief sys-

tem, while in Baltimore new ordinances went into effect in 1900. In general there is a strong tendency to take away from cities and counties the care for two classes of dependents, children and the insane. Several states have introduced an exclusively state system for unprotected children, and require that the insane be placed in state institutions. The relation of the states to one another causes considerable difficulty because, as in Switzerland, the laws of the states are so unlike. In most of the states there exist settlement laws according to which a settlement or residence for a certain time obliges the township to provide relief. As a rule an unqualified residence for a certain time suffices; and this period in eleven western states is from one to six months, in nine states one year, in Virginia three years; while in some states, as in Connecticut, New York, Ohio, the condition of self support, and in some states, as Massachusetts and Pennsylvania, the possession of property, is required. In ten states there is no requirement for settlement, while in two others it is merely necessary that the person concerned has come within the state boundary in order to receive public aid. Very strict regulations exist in relation to the removal of dependents. Persons without settlement are sent away as quickly as possible. Persons who receive aid outside of their settlement are generally relieved temporarily, and then sent back to the place of their settlement at the cost of the city or county.

The difficulties growing out of this situation, which increase with the extension of the means of transportation, and have occupied public thought frequently, have been in recent years repeatedly the topic of discussions in the National conferences. Reports in 1898 and 1899 were made, a part of which treated immigration from outside of America, while the other dealt with interstate migration and settlement in the relations of American states to one another. The prohibitions of immigration, which are exclusively the affair of congress, and which date from an earlier period (1882 and 1885), exclude persons from entering America without means, as well as foreign laborers under contract with employers. The movement against the admission of immigrants and in favor of widening the prohibition of immigration is closely connected with the burden of

poor relief of the insane. A very unequal use seems to be made of existing laws. In his report of 1898 Sanborn investigates the problem with special reference to the insane. According to his view, which he supports with reliable figures, there is no doubt that immigrants have greatly contributed to the increasing number of the insane. Thus in Massachusetts during seventeen years the population grew from 1,780,000 to 2,580,000, the number of the insane from 3,168 to 6,547, which indicates a growth in the population of 45 per cent and of 107 per cent for the insane. Guenther opposes with great energy the recent tendency to limit immigration; especially he rejects the suggestion that the immigrants must pass an educational test. He says:

"No one can desire more than I do that all elements which are dangerous to us should be excluded; but I do not say that a person physically and mentally sound and of a good moral character should be refused admission to this land simply because he never had an opportunity to attend school. The chief object of the agitation is to limit immigration, from a self seeking, and on the whole, unjustifiable purpose of preventing the restriction of the American laborers' industrial advantage. The fact is overlooked that the newcomers are not only producers, but are also consumers. I am quite clear that the professional labor agitators are responsible for this crusade against immigration. Since they know no other means of keeping back friends, they imagine that the educational test will help them at least a little. If these people could do it, they would put an end to immigration altogether. Senators and representatives in congress know how to use these people for their own ends, and when they preached the limitation of immigration they claimed that they did it for the glory of the people of the United States. They asserted that the law was not directed against the Germans and Scandinavians, and would scarcely touch the Irish, but they wished to exclude the Italians, the Russian Jews, and the Hungarians, since these are good for nothing and corrupt. What do they care for these people, those who are neither Italians, Russian Jews, nor Hungarians? Such expressions are unworthy of a wise people. The people against whom these restrictions are

aimed belong to the Caucasian race, which in religion, art, and science stands above all other peoples of the earth. There are good and bad Italians, good and bad Hungarians, good and bad Americans. Under present laws we can exclude all bad elements, whether they come from Germany, Sweden, Russia, or any other country; but I stand by this proposition, that a man is not proved to be bad because he can not read or write."

Much more important for public poor relief is the question of interstate migration and settlement. On the ground of a report made at New York the conference decided to establish a standing committee of seven members which should work for the introduction of uniform settlement laws for which there exists a real demand. The committee made a report on the subject the following year, and fixed upon the general outlines of a uniform law, the most important points of which are: agreement upon the period of residence necessary to obtain state and local settlements, the return of persons who do not belong to the community, and the creation of a board for the decision of mooted questions. On the whole, these propositions come near to the German system of legal settlement. Acceptance of relief, reception into a public institution, etc. are not to be reckoned in. Persons who in this way have not obtained the rights of residence in a locality, but who have remained a year in the state, are to be counted citizens of the country in which they have remained the longest time. Persons who have become a burden to the relief authorities, and have no settlement are to be sent away as quickly as possible, and that to the state to which they belong according to the previous interpretation.

The public poor relief, like that of England, rests upon the more or less exclusive application of the system of indoor relief. The poorhouses or almshouses are, as Warner calls them, the charitable catch-all for the community. The laws exclude public outdoor relief partly in cases of permanent dependence and entirely for able bodied persons, so that only the sick, defective, and similar persons may be relieved temporarily by the outdoor method. Outdoor relief, for example, is abolished in many of the great cities, as New York, Brooklyn, Baltimore.

The attitude of state relief is only intelligible when one

considers that a richly developed private charity precisely in the field of outdoor relief comes to the aid of public relief, and that the effort to keep the care of children, the feeble minded, the sick, and the defective separate from other public poor relief is constantly gaining ground. F. Almy has published a study in the *Charities Review* on the relation between private and public outdoor poor relief, in which he has brought together the facts about public and private outdoor relief in forty American cities. The figures are, as the author himself makes clear, not very satisfactory in relation to private charity, since a very great part of private charity can not be represented in figures. Nevertheless the tables give an approximate representation of the importance of private charity, which always comes into relief where public outdoor charity is not employed or only in limited degree, as is seen particularly in Baltimore, New York, San Francisco and St. Louis. In certain cities, as Boston, considerable expenditures from both sides nearly balance each other, while in others, as Cincinnati and New Orleans, expenditures for public poor relief, as well as for private charity, are described as unimportant. In some cities, as in Syracuse, public poor relief gives assistance in large measure, while private charity seems to be lacking. The figures seem to me not very reliable, since it is impossible that in ten of the forty cities no private charity should be given, and in ten others an inconsiderable sum. In these cases accurate information seems to have been lacking. At the same time, a certain interaction between the two factors is not to be denied.

Against the extension of legal outdoor relief the argument is often urged that it represses private benevolence, or at least makes its task appear less exigent. Among recognized authorities Dr. Walk, of Philadelphia, declares that no need has been felt in his city for restoring municipal outdoor relief, and that private benevolence was entirely adequate. Miss Richmond, of Baltimore, thinks that the anxiety about doing away with this system may be compared to the dread of bringing infants out of overheated rooms into the fresh air.

Wilson remarks in his report (National Conference, 1900) that he had made inquiries of many charity workers in smaller

cities in order to learn their opinions and experience, and that almost all had expressed themselves as favorable to private outdoor relief, although some believed that they must defer the entire abolition of outdoor relief on account of the special circumstances of their community. Especially worthy of notice is his account of Tacoma, where relief from public means had been suspended, and where investigation and the menace of sending visitors caused many to decline further help from public poor relief. The incisive language of this part of the report is as follows:

"Cut off from their supplies at the courthouse, the long procession which had received its monthly dole of alms from that source took up its march for this office. Great was its disappointment when we began to ask questions and to speak of sending visitors. Not a few were disgusted and flatly declared, 'Well, if you're that particular, I guess we won't bother you.' The upshot of the business was that scores at once went about doing what they would better have been doing long before, i. e., taking care of themselves. \$150 a month easily took the place of the \$1,000 formerly paid, and with what advantage to the recipients you very well know."

A remark of Bailward seems to be significant also within the limits for German relations. He says:

"It is self evident that in individual cases it is much cheaper to give any one sixty cents in outdoor relief than to support him in a poorhouse at \$1.25 a week; in the long run, however, nothing is dearer than this procedure. The more outdoor relief is applied, the more demand there will be, after a time, for indoor relief."

I have laid emphasis on this remark, because in Germany also the facts again and again awaken similar reflections. Very often the American reports pay us the compliment of saying that our individualizing and honor office system would admit of extended outdoor relief. In the last analysis the question of the right use of one or the other system, or of both in reciprocal relations, is, as Henderson rightly remarks, a question of practical administration whose success depends upon the value of its organs. The apprehension in respect to admission of legal outdoor relief is therefore doubtless con-

nected with the conditions in the administration of relief, and which on the whole justify the opinion. Public agencies, as we know them, can not individualize.

The subject was thoroughly discussed in the National Conference, May, 1901, in connection with the report of F. H. McLean, which treated the conditions in Montreal, where public relief is entirely wanting. It was argued that private charity alone is unable to fulfill the duties of poor relief, that it would even be demoralized and its principal task be neglected, if it were compelled to do that for which by its nature it is not suited. There was a decided tendency to favor public poor relief in all those cases in which a careful control of personal conduct is necessary, while private charity is better adapted to the cases in which free activity is possible. Fundamentally this is the principle of division which is actually made in Germany, although here the laws go much farther in the promotion of the general poor relief. It is well worth noting, and is applicable to conditions outside America also, that private charity itself, where it conducts the entire business of poor relief, as in Montreal, may, quite as much as public relief, degenerate into unreflecting routine.

Still, we must acknowledge that the efforts to individualize in all forms of administrations of public relief has made important advances in recent times. The condition here is similar to that in England. Removal of children, the sick and defectives from the poorhouses, better classification of those who remain in the poorhouses, according to character, are demands which have been strongly urged for American poorhouses, and partly carried out.

In a report which Alice N. Lincoln made to the National Conference in 1898 on the classification of paupers she made the claim that in poorhouses rewards for good conduct, and deprivations (not punishments) for bad, are admissible, and that earnest endeavors must be made to treat the poor as individuals, not as members of a class; that separate rooms for the inmates of different grades must be provided; and that the officers of poorhouses must be taken from a higher social grade. Similarly, Byers, in his report on public poor relief, makes prominent the deplorable mingling of different classes of the

poor in the same house and the same rooms. In this field, almost without exception, the states show an actual advance; none of the reports which lie before me omit the mention of the ever extending care for children and their removal from the poorhouses, and the erection of special hospitals, particularly for the insane and defectives.

The question of relief of the unemployed, which is so closely related to the question of poorhouses, has also awakened lively interest among American administrators of poor relief. Tramps in most of the states are treated as offenders and are sent to the prison, house of correction, or workhouse, or sometimes to the poorhouse. As a rule, they are required to work in return for accommodations; and sometimes punishments are added to labor. The length of the confinement is ordinarily fixed by the sentence. It is higher in the New England states and gradually diminishes toward the west and south, where the sentence seldom extends beyond ninety days. The punishment in the east is more severe than in the west, and yet the plague of beggars and tramps is by no means under control. For the unemployed in general, who do not belong to the class of professional tramps and beggars, the workhouse test—that is, the offer to support in return for labor—is declared by experts to be necessary in order to distinguish between those who are willing to work and the shirks.

In the field of medical relief we notice an advanced movement which aims, like the one in England, to remove the sick and defective from poorhouses and to provide special arrangements for them. First of all I may refer to the newly established Craig colony for epileptics in the state of New York. It was opened early in 1896, and has since received 530 epileptics; at present it has about 400 inmates, and a capacity of 700. The importance of the institution lies in this, that it goes far beyond a mere place of detention, and makes possible a family life in groups similar to the well known colony of Bodelschwingh, in Bielefeld, Germany. On land in the country, cottages are erected in which the inmates live like families. The grouping of the sick and careful observation of them receive special attention, which shows its effect in a remarkable diminution of the number and gravity of the attacks. The

physical as well as the mental development is promoted. All kinds of work are carried on in the colony; school instruction, partly in evening schools, trade instruction, natural science studies, and occupations in handwork and gardening. Many recreations and entertainments are furnished, as lectures, concerts, sports, and celebrations of national and other festivals. The entire establishment is primarily designed for dependent persons of the state of New York, but pay patients are also admitted so far as there is room. The report of the state board expresses satisfaction with the results so far attained. Similar arrangements exist in Ohio and Massachusetts. In most of the other states epileptics are still sent to the almshouse. In May, 1901, was held the twenty fifth annual meeting of the National Association of Institutions for the Feeble Minded; and there the separation of the epileptics from others who suffer from defects in the nervous system in special institutions or colonies, and a careful classification like that of New York were approved. Similar views were expressed at the National Conference in 1901.

To the care of defectives, especially of children and youths, great attention and large means are devoted. In almost all states, institutions exist for the instruction of deaf-mute and blind children. These are either state institutions or private institutions, which are paid by the state for the care of children sent to them. This, for example, is the method for both deaf-mute and blind children in Massachusetts, Connecticut, New Hampshire, Pennsylvania, and for the deaf mutes of Oklahoma and New York. Generally the institutions are designed for children of school age. The residence varies in duration, and is between two and six years, the former in Texas and Oregon, the latter in Alabama. In sixteen states a distinction is made between dependents and those who pay, but usually board and education are gratuitous. In addition to these special institutions there are also in some of the larger cities, provision for the instruction of deaf-mute and blind children in the public schools, as, for example, in Pennsylvania, where school districts which have eight or more deaf mutes among twenty thousand children must provide

suitable instruction for them. In Wisconsin the state appropriates \$100 for each child of this class.

In contrast with institutions for the blind and deaf-mute children, there is adequate provision for the adult blind, who, for the most part, if not otherwise supported, are sent to the poorhouse. Exceptions are found in Ohio and California. In Iowa, of late, a work place was erected for the blind, and its object is to give them occupation and to enable them to support themselves. In Maryland the institution for the juvenile blind is authorized to employ a part of the income of its funds for the erection of workrooms and places for the sale of wares made by the blind. In New York the conductors of the institution for the blind in Batavia are authorized to assist needy pupils in their occupations at state cost.

America has given special attention to the education and care of deaf mutes. At present more than ten thousand deaf-mute children are sheltered in schools and homes, although by no means all such children enjoy this benefit. The Illinois report states that the great institution at Jacksonville has received during the last few years between 500 and 550 children, but that more deaf-mute children are growing up without any instructions than those who are taught. In the institutions themselves the best educational methods are employed, and a domestic life with work, entertainment, and recreative plays is provided. Especially for experts it is worthy of remark that instruction in sign language is gradually giving way to oral speech. A comparative view shows that the first method was employed with 4,987 pupils in 1892, and only 3,992 at present, while the complete oral instruction was given to 4,451 in 1900 and to only 963 in 1892; and partial oral instruction shows a decrease from 3,282 to 1,848. The relative percentage therefore, at present is 49 for the sign language, oral instruction 43, and partial oral instruction 18. The Illinois school began in 1893 to emphasize oral instruction. The division has grown so that in 1900 it included 296 pupils, while those who received instruction in the sign system included 250 pupils.

In this connection especial attention is drawn to two works: *Histories of American Schools for the Deaf*, in three volumes, by Fay, which was prepared for the World's Fair of

1893, and contains reports, with numerous illustrations, on all American institutions; and the work of Fay, *Marriages of the Deaf in America*, which shows astonishing industry. It grew out of a proposition of Graham Bell, the celebrated inventor of the telephone, who deserves great honor for his service in the cause of deaf mutes in America, and who established a fund for this purpose. The object of the investigation was to discover whether marriages of deaf persons contribute more than other marriages to the increase of deaf mutes, and especially whether this is true in a higher degree when both parties are deaf than when only one is afflicted, and whether certain classes of the deaf are predisposed to have deaf children. The result is represented separately for each of the 4,471 persons counted. The principal result is that marriages of the deaf are more frequent in America than in Europe, and that marriages of deaf persons there have increased in an extraordinary degree, during the last ten years from 0.02 per cent to 2.27 per cent. The increase is rightly ascribed to the establishment of numerous schools for deaf mutes, which not only favor acquaintance of defective persons with one another, but also bring deaf mutes into nearer relations with society in general, and so enable them to marry and rear a family. The majority of married deaf mutes are married to the deaf, in the ratio of 72 to 28 compared to those who marry hearing persons. The marriages of the first kind run a happier course than those of the second, among which the number of divorces is greater. Both works are to be strongly recommended to specialists, and the book of Fay relating to marriage contains a complete bibliography of the subject.

The pamphlet on Helen Keller reports an almost incredible devotion, on the one side, and an extraordinary development of faculties in a defective child. This remarkable girl who has frequently been discussed in literature relating to the deaf and the blind, although she is both blind and deaf, received a complete scientific education, on the ground of which she was admitted in 1899 to Radcliffe college. In this pamphlet one may read by what a vivid and immeasurably patient method this result, bordering on miracle, was reached.

For crippled children, the Childrens' Aid society, moved by

the Guild for Crippled Children of the poor, established day schools in which, in addition to elementary instruction, they learn a light handicraft (making cheap toys) and are enabled to earn something at home in their leisure hours. A convenient carriage takes the children to the schools in the morning and returns them to their homes in the afternoon. In the school, in addition to the teacher who is intrusted with the care of the sick and with the kindergarten, there is a nurse who washes, massages, bandages, gives necessary care in the dispensary or hospital, instructs the parents in methods of dealing with the children, and induces them to furnish necessary treatment. The advantage of this day school over the hospital, apart from the diminution in cost and the easier care for a large number of children, consists in this, that the interest in the children is not taken away from the parents, but they are induced to manifest even greater interest and love. At the beginning it was difficult for the society to bring the children together; the mothers were distrustful of everything that looked like a hospital; hard to persuade because they feared admonition or punishment for the neglect, or of refusal to apply the prescribed treatment. Thus the school in the first year had only twenty pupils, and it was with difficulty that the number was increased. The school now numbers forty five pupils and enjoys general confidence.

The rooms of the day school are two large instruction rooms, a dining room with adjoining kitchen, and a large clothes room in which are found all necessary appliances for bathing, bandaging, massaging, etc. Benevolent ladies have undertaken to provide food and clothing; they meet the expenses required for beds, rolling chairs, carriages, and the like. On the seacoast they have established a summer home for convalescent children. Physicians occasionally visit the institution and assist the teachers by their advice. How essential this kind of treatment is appears from the fact that the Children's Aid society has established two other classes in different localities and projected two new schools. In this connection may be mentioned a law which authorizes the establishment of a state hospital for crippled children, with an appropriation of \$15,000. The report from Minnesota says

PROPORTION OF FOREIGN BORN WHITES 10 YEARS OF AGE AND OVER WHO CANNOT SPEAK ENGLISH:



LESS THAN 10 PER CENT 10 TO 15 PER CENT 15 TO 25 PER CENT 25 PER CENT AND OVER

THE PREDOMINATING SEX:



FEMALES IN EXCESS MALES IN EXCESS 5 TO 10 PER CENT 20 PER CENT AND OVER

10 TO 20 PER CENT

that in 1897, when the first state hospital for crippled children was founded, the medical college of the state university was legally required for two years to treat the children gratuitously and care for them in every way; \$5,000 was set apart for each year. The members of the medical faculty thereupon made a contract with the hospital, according to the terms of which the care of the children, with the exception of medical treatment, was committed to a superintendent. The university paid for this service weekly \$3.75 for each child between two and twelve years of age, and \$4.50 for those between twelve and sixteen years. After an experience of two years this arrangement was voluntarily continued. The hospital set apart a building with thirty beds for the exclusive use of crippled children, which at present is so full that some patients must be sheltered in the central building. The state hospital for crippled children thus became an independent institution, for whose support \$16,000 were appropriated for the next two years.

The movement for combating tuberculosis has made progress in America. The number of institutions thus far provided for dependent persons is not very great; the most important being the St. Joseph hospital in New York, with 350 beds, and the Cook county hospital in Dunning, Ill., with 380; two institutions, with 125 and 200 beds in Massachusetts; one with 92 beds in Brooklyn; and one with 100 beds in Baltimore. A second sanatorium of the Montefiore home was recently opened, with 100 places, which they hope to increase to 350, so that with the one earlier erected it can provide for 500 sufferers. New institutions have been erected in New Hampshire, New York, and Connecticut. In Pennsylvania the society for preventing tuberculosis has erected a sanatorium. The Adirondack college sanatorium of Dr. Trudeau occupies a peculiar position. It has published its fifteenth annual report, and Liebe, in his book on public hygiene, remarks that it must fill the German physicians in sanatoriums with a kind of envy. It is a colony in which from 250 to 300 invalids are annually received. The extension of the care of the sick by trained nurses, who, during three or four years, are thoroughly instructed in schools connected with hospitals is very important. The work is satisfactory, and is by no means

regarded as of little value, as in Germany so often happens.

It is as true of America as of England that the care of children belongs to the most promising field of relief effort. The physical and moral education of poor children, with the exception of those in poorhouses, is almost entirely neglected. They grow up in dirt, indolence, and sickness, and many fall victims to premature death, or are taken to prison. On the contrary, the health and mortality of children in the poorhouses are preserved; they receive an education which enables them to care for themselves.

The arrangements for children correspond to those in other lands,—institutional care in great orphanages, of which America possesses some of the first rank, or in small homes; and the union of both systems by reception of the children at first in a central place, and their transfer hence to family care—the so-called state public school system, or the Michigan system, because it was first applied in Michigan, and now enjoys a great reputation in America. Along with the exclusively public and exclusively private care of children exists the system of subsidies from public means to private institutions.

More and more the system of family care gains in importance, although at first it was hindered in the attempt to remove children from poorhouses by the tendency to replace poorhouses with splendid institutions for children. Life in a family, especially in a well ordered rural family, prepares the child for life far more satisfactorily than is possible in an institution. In an institution the children are taught rather too much of heavenly and too little of earthly things. The atmosphere is only too well adapted to train them in dependence. Shelter is provided; food is always ready; clothing, good beds, warm rooms are at their disposal, without the least thought or care on the part of the children.

Altogether different is family care. It is said in a report of Illinois in 1899:

“In a real domestic household all members of a family are bound together by reciprocal ties. In the nature of family life, persons help each other and make sacrifices in turn. There is the great world in small, and the relations of the members to each other correspond to those which the child will find

in later years in society. It is a work place, a school of labor, where daily practice in household duties prepares the child for further duties."

Family life alone can teach the children self control, submission to the conditions of practical life, and capacity for independent action. From the standpoint of poor relief, we mention also the advantage that family care is essentially cheaper than that of the institution. If there is a reasonably general agreement that family care is theoretically the best form, this does not imply that institutions in a certain measure may not be accepted, and least of all requires us to shut our eyes to the dangers of inadequate family care. Institutions are most of all necessary to the reception of children, to observe them, and to select for them suitable homes. There are many children who, on account of their character, or on account of their physical or psychical defects, are not adapted to home life, or proper families cannot be found in which to place them. By the extension of the group system in the larger institutions, and by the erection of homes, the danger which attends institutional care is materially diminished. The dangers of inadequate family care are very thoroughly proved in the reports of several authors; Hebbard especially goes into the subject fully, and illustrates with many examples how unscrupulously the placing of children is often conducted, how frequently the foster parents regard the care of the children simply as a source of income and exploit the labor power of the older children in the most shameless manner.

It is remarkable that Englishmen and Americans, who are so sensitive about state paternalism in the field of relief are ready to demand state supervision, and discover in this the best protection against abuses.

Of essential importance for the entire development of child-helping work in America, as in England, is the activity of private societies like the children's aid societies. Such societies exist in most of the large cities.

Help is afforded according to the individual case in many forms; indoor or outdoor relief, training for a calling, improving the health by summer outings, etc. Principally, however, the effort of the society is directed to removing chil-

dren from the crowded city and placing them in the country under wholesome conditions of life, as apprentices or as foster children; an effort which, in view of the increasing current toward the greater cities and industrial centers of America, has great significance, and is worthy of thought in similar situations in Germany. In one year 581 children were sent to the country, of whom 326 found homes and 255 boarding places for payment. From neglected families came in all, 1,013 persons, mostly children, for whom in the state of New York work or other help was found through rich supporters, so that a total of 1,594 persons was removed from the city to the country. Of 245 children intrusted to the institutions, 170 were placed in families, the others returned to their relatives. In spite of the greater cost of the care exercised in selection and control required by the placing system, and although the conditions of life surrounding them were more wholesome and helpful to the development of the children, yet the cost of family care in the country fell greatly below that of institutions in the city; a child in a city institution costs yearly \$120, as against \$35 for rural family care. Two hundred and fifteen children were taught in the farm school in order to prepare them for positions in the country. From the farm school were sent 573 pupils, of whom 316 found situations; the others had left school for various reasons or were returned to their relatives. The society possesses twenty six day and evening schools, which were attended by 14,615 pupils with a daily average of 7,063. Three of the schools have special classes for defective and crippled children, for which special teachers and attendants are employed. The children are brought in conveyances to the school, and returned to their homes in the same way. These auxiliary classes prove themselves very helpful, since needy crippled children grow up generally without instruction and frequently without adequate care.

Of greater importance are the visits which the teachers make in the homes of their pupils in order to gain insight into their surroundings, and to regulate attendance upon the schools. One year 17,970 such visits were made, with the result that 1,043 truant children were referred to the society and 7,583 cases of extreme neglect were made known and help

secured from the society. The lodging houses of the society offered temporary shelter to 5,163 boys and girls; the average daily population being 413. For 797 of these children positions were found, 215 went to the farm school, and 133 returned to their relatives.

Private societies also have led the way for the legal protection of children against cruelty and abuse; the first of these was founded in New York in 1875. At present 157 of these exist, a part of which are also devoted to the protection of animals; and it is interesting to note that societies for the prevention of cruelty to animals existed in America before the organized efforts to protect children.

The New York society has taken for its task the care of maltreated, neglected, criminal, and vicious children. It receives complaint for investigation, brings charges in cases made known to it, and enforces legal regulations for the protection of the children.

The children left in the care of the society are placed in institutions temporarily, or permanently placed in families; often, however, they remain under supervision with their relatives.

The care for neglected children, which is partly included in the general laws on the subject, remains far behind the English methods, since federal legislation is not involved, and the laws of particular states are indecisive. There exists in the more advanced states a tendency to exclude children and youths from the prisons and receive them into reform schools, which are called, as in England, reformatories, and industrial schools. The names have been changed repeatedly because it was observed that a certain reproach was attached to all of them after a time, which was an obstacle to the success of the pupil. In all institutions of this kind an essential factor for improvement and education is industrial training.

Worthy of note, in respect to the condition of the reform schools for girls, is a study of the discipline in reformatory institutions for youth. Since it was apparent that very defective administration in a number of these institutions had led to excesses, the New Jersey State Charities Aid association sent out a schedule of sixteen questions, the principal of which

were: principles of discipline, ordinary methods of discipline, corporal chastisement, cellular confinement, immorality as a difficult factor in the problem of rescue, incorrigibles, special education of the officers and teachers, large institutions in contrast with the group system. From the answers sent in, some of the principal typical suggestions will here be noticed: The object of education must first of all be to give the children to understand that the voluntary obedience to the rule of the institution will serve their own welfare. Trespasses are to be punished only in extreme cases. Great importance is attached to individual treatment, since one method has quite different effects on children of different temperaments.

Reports are also made upon the different methods of punishment, as the employment of a book of complaints, loss of certain privileges, exclusion from recreations, withdrawal of a mark of distinction; all of which serves to spur the children to industry and good behavior. Whipping is declared by most of the directors to be injurious, and therefore to be applied only in particular cases, while solitary confinement is widely used, though in mild form. In respect to the difficult problem of immorality, almost all depends on the personality of the director. The education must be so directed as to keep the children free from unwholesome suggestions, as by means of fresh air, daily physical exercise, constant occupation of body and mind, cleanliness, and nutritious diet. On the whole, the judgment was that vices of this kind are prevented more by moral training than by corporal punishment. Of the two systems of education, the preference is given to the small group over the large institution.

Of its kind quite unique, one may say genuinely American, is the undertaking called the George junior republic. It is a reform work for neglected children, and attempts to develop in boys and girls from the worst parts of New York a sense of individual responsibility and independence, economy, and regard for law. They are made acquainted with the forms and importance of organized administration and they are taught sympathy and patriotism. The George junior republic is the creation of William R. George, of New York, and is a reform school on the basis of self government. Mr. George proceeds

from the conviction that neglected children, even those that come from the families of criminals, can not merely by stern discipline be made into better men, but that education by the action of the children on each other, under the intelligent direction of an adult, will ripen the best fruit. Further, he believes that these children can best be educated to become useful members of civilized society, if they can be placed in relations similar to those of the world at large. Here as there the means of living can be obtained only by labor. No one is required to work, but "he who will not work shall not eat." The teacher does not use compulsion, but the conditions themselves, as in real life, are compulsory. Both these thoughts, self government and the compelling might of conditions, training to labor for support, are remarkably well carried out in the George junior republic, and have become so conspicuous, that the institution is imitated in the different parts of the United States. The whole arrangement, which originated in a vacation colony which Mr. George received at his house in the country near Freeville, and began with thirty very poor children, gradually developed into a permanent settlement with the form of a miniature state, in which the members themselves exercise police power, hold court, and administer affairs. The republic has the rights of a corporation, and is conducted by a board of trustees at whose head Mr. George stands. The means of support, since the product of the children's work naturally covers but a small part of the expense, are furnished for the most part by an association called the republic association. The territory occupied by the republic contains forty acres; it is an elevated plateau in an attractive district of the state of New York, about a half hour from the town of Freeville. On the farm are several buildings, one of which is occupied by Mr. George and his family. All the houses are built by the boys under the direction of adult craftsmen, and it is hoped that after a time all the children will be placed in small separate houses in groups of ten or fifteen under an adult, each group with its own kitchen, table, and recreation room.

At first Mr. George made himself president of the republic, and distributed the most important offices of the little state

among adults. In the year 1896 these were removed from their offices and replaced by boys, since the children understood better than the men how to get along with their comrades, and the feeling of responsibility awakened in them self respect, and a striving for honorable behavior. In 1887 for the first time the president was also chosen from among them, and that for one year. By his side stands the legislature, consisting of a senate whose members are chosen for two weeks, and the house of representatives, whose appointments have force for only one week; so that all capable citizens can take part in the legislative work. Every occupation class elects one representative to twelve persons for the house, and also one for the senate. The laws of the republic are those of the state of New York, but amendments may be made by the legislature and the president. For every offense the citizens are brought to account. If a complaint is laid, a session of the court is called to be held in the evening. In simple police cases only the accuser and the plaintiff appear before the judge, who alone renders a decision; in more important instances, six jurymen and several witnesses are called, and only in complicated cases attorneys. Punishments are usually fines, work, and confinement. For repetition of an offense the punishment rises progressively. In exceptional cases other means are employed. For example, in the case of a girl on whom no punishment made an impression, her hair was shorn. That worked wonders, so deeply did the child feel her honor touched. The incorrigible are excluded from the republic. Those who conduct themselves exceptionally well under correction are admitted earlier to freedom. The office of policeman is about the most respectable and desirable in the republic. To attain it an examination is required. The policemen are paid out of the taxes and are dressed in uniform. Each is responsible to the police board, and, like every officer, loses his position at once if he does not fill it conscientiously. He is severely punished for overlooking an offense or permitting a prisoner to escape; and a misuse of his power brings a penalty. The longer the children remain in the republic, the less frequently, as a rule, do they need correction. While in 1896, fourteen serious

offenses were registered, in 1897 but two were noted. It is remarkable that offenses which no reform school or prison was able to uproot have here disappeared.

The work of the children includes every thing necessary to be done. The girls perform household work, such as washing, ironing, sewing, cleaning, cooking, etc., in which they receive instruction. The other work falls to the boys, as building, carpentering, shoemaking, bookbinding, barbering, etc., under the direction of craftsmen; the agricultural labors are directed by farmers in the neighborhood. The citizens are required to attend school until they are sixteen years of age, daily—Saturday and Sunday excepted—from 10 to 12 and 1 to 3. For attendance each one receives weekly \$1.75, but only when they work for their support. Besides school and work there is provided plentiful recreation and mental occupation. Communication of the children with their relatives during their stay in the republic is materially restricted. At first frequent correspondence is kept up, since they are usually homesick, but gradually it is neglected. They soon discover that their new views no longer correspond to those of their former companions. As they learn to despise their former sinful life, they can no longer value its environment. The conduct of their parents and old friends seems now to be objectionable, and if they continue in contact with the home, it loses its influence over them. When the children grow up they are placed at trades or are otherwise instructed; but Mr and Mrs. George keep them in mind and correspond with them. If the employer complains of the conduct of his apprentice, the latter is given earnest advice, and, if necessity arises, is brought back to the republic. Of late, in Auburn, a society of former junior republicans has been formed and holds together with fidelity and in close relationship with Mr. George.

Such poor children may be developed into capable and good citizens, not merely by punishment and by a temporarily forced change of conduct, but by the pressure of surroundings, voluntary choice, and better insight.

Of particular methods of caring for children may be mentioned, in conclusion, the summer colonies, to which great attention is given.

Although the movement to establish these colonies in America reaches back to the first third of the nineteenth century, it found its first important expression in the work of a public school teacher, Miss E. Very, in 1879, who established, with the support of a woman's educational society, the first vacation school in Boston, whose purpose it was by instruction and play to act upon the children in their time out of school and withdraw them from the vicious influences of the street; a thought which found imitation and extension throughout the whole country. Originally the vacation schools were designed for children between the ages of two and twenty years, and the program, in order to win as many children as possible, laid emphasis upon amusement. After longer experience, the necessity of separating children according to age, work, and play became apparent; so that now, in addition to the vacation schools proper, there are also play schools and open spaces, while for the smallest children school takes the character of a kindergarten. Children between the ages of ten and fifteen receive training in sloyd, instruction in drawing, and in natural history by means of holiday trips into the country or parks for the observation of animal and plant nature; singing and industrial occupation, as tailoring, cooking, etc., always so far as possible adapted to the individual needs of the pupil or his home life. Not seldom the instruction in the vacation school helps to determine the choice of future vocations. The length of a course is from four to eight, as a rule six, weeks, the daily instruction usually of three hours; two courses a day are given either successively, or in the forenoon and afternoon. The place of teaching is in a room of a public building; the direction of the affairs is in the hands of trained teachers; the daily average cost per child varies between 5 and 25 cents.

As in England, so also in America, private charities develop in a high degree. This corresponds not only to the peculiarities of American beneficence already indicated, but also to the fact that the public poor authority is rather averse to outdoor relief, and limits itself, especially in the greater cities, to indoor relief, in poorhouses and other institutions.

American charity has to contend in a higher measure than is true on the continent with the evils of division and absence

of system. To the insight into the dangers of this condition many central societies owe their origin, which, according to the English example, are called charity organization societies. The principle of charity organization societies remains essentially the same, and yet we must refer to them again and again, because unfortunately, even in Germany, they are so commonly neglected. When Johnson in his report for 1899 at the National Conference used the words, "In spite of the danger of being wearisome and of repeating what has been said 30 times before," every one who works in these matters practically will be disposed with him to employ the same introduction and to repeat for the thirtieth or the one hundredth time these things, just because it is so necessary to repeat fundamental principles. Glenn, in his paper on the necessity of organization, has formulated these principles very well:

A charity organization society offers itself as a central point of information, where the leaders of various enterprises may secure information about each other, as well as about the poor, and as a clearing house of activities and ideas.

It also collects materials relating to the poor and gives information to all who have an interest in them, prepares statements concerning the charitable provisions of the city, and offers a central point for obtaining counsel in help. All this is in the spirit of reciprocal confidence and with the view of repressing the abuses of charity in order to have all the more power of assisting those who are needy.

The general arrangements of these societies are every where similar, the chief aim being to unite the benevolent efforts and of providing particular kinds of help to serve special needs, as for example securing employment, provision of shelter and refuge for women, etc. The division of labor between standing committees is common to all, each being charged with a special task. They all emphasize the necessity of personal help, and constantly renew the appeal for coöperation. The title page of the Buffalo report is adorned with the words:

"Let no one think that he can discharge his duty to the poor by contributing to the society. You can never perform your full duty to the poor through a society; what we need is personal help, and this society was founded to secure it. Our

effort is, through division into districts and in other ways, to find a personal friend for every poor family, and we earnestly request all to stand by us as voluntary helpers in benevolent activity."

The societies, apart from their own enterprises, give none of their own means for support, but seek to investigate cases referred to them and to secure means in individual cases, and to refer cases for further aid to other institutions which stand in close relations with them.

A peculiar position is occupied by the United Jewish charities in New York. It grew out of the same discovery of unsystematic and divided charity to which the Charity Organization society owed its origin; and after the experience of a quarter of a century it declares its satisfaction that its efforts have contributed materially to the diminution of these evils; but at the same time it expresses the wish to have more means and more personal service at its disposal. It also has a number of standing committees and a number of institutions of its own, among which an educational institution for girls and an employment bureau are conspicuous. Of special importance is the work for immigrants, who come mostly from Russia and Austria. Each year the society handles a population equal to that of a medium sized city, which arrives in America without knowledge of the language, often helpless, and by the regulations of the government threatened with the impossibility of obtaining employment. Counsel is given the immigrants even when they are not in absolute want, the destitute are relieved, and means are provided for returning those rejected by the public authorities. Up to 1890 the work was conducted for the most part by the Hebrew Immigrant Aid society, to which the association in 1884 joined its efforts, with a committee which worked especially at the landing places. In 1890 the Baron Hirsch fund was founded, whose administrators were members of the committee of the association; from this fund and from the Jewish Colonization society, founded by Baron Hirsch at the same time, the association received the means for assisting immigrants. In 1891-92 the Russian Transportation society, the American Association for the Relief of Russians, and the Central Russian Refugee committee were

established, in which the central board of the association was represented. In the report the assistance of immigration authorities is praised. To the efforts of the association was due the change of classification of Jewish immigrants; while up to 1898 they had been classified by confession, from that time they have been classified like other immigrants, according to the place of their origin.

As in England, though not to the same extent, the work of the Salvation Army has been developed in America, and has found even more favorable conditions, because there is no state church, and the religious and sectarian activities have a free field. The organizer and leader of the movement in America is Booth Tucker, son-in-law of the general. In all there are 160 organizations of the Salvation Army, among which are children's asylums, homes for women and girls, lying-in homes, public kitchens, employment bureaus, homes for discharged prisoners, nursing, workmen's colonies and winter relief; and every where the tendency is not to support, but to aid, to call forth all the powers and capacity of the person who is in want and assist him to regain his independence. The principle is held that all help offered must be paid for, so far as possible, in money or work. Noteworthy are the three agricultural colonies established in Colorado, California, and Ohio, on which thirty buildings have been erected, and where about two hundred men and women have been settled, and of whom the greater number have obtained independent homes. In America, as in Europe, the current sets toward the cities, most of all to the largest, and countless unemployed are massed there, while there are far more places in agriculture than can be filled. A singular enterprise is the sending of poor families, who otherwise could never breathe pure air to the country. In this division of the army work, outings by water or land are provided, and frequently street car companies furnish free transportation. The work out of which the entire service of the Salvation Army has grown—work in the worst quarters of the great cities—is carried on in the great cities of America with splendid and untiring devotion. It is conducted by women, and even more by young girls, who fearlessly venture into these quarters, and in spite of all failures, all scorn and

threats, and actual danger to life, give themselves to the most wretched classes of beggars, drunkards, harlots, and criminals, in order to aid them, with patience, forbearance, and goodness, to uprightness. These girls live in the neighborhood of their work, clothe themselves in a modest way, and are, after a time, we are assured, entirely safe under the protection of the whole population of the district, where they can go about freely and without peril. Granted that the success in comparison with the great multitude is small: as examples of personal devotion and of capacity to awaken again, even in the outcast, the little spark of human feeling, these heroines of the Salvation Army are unsurpassed.

The work of the army goes beyond the boundaries of that which we are accustomed to call private charity, and approaches, especially in the last mentioned activity, that which is called, after the English example, a settlement. The movement has gained in importance and extent during recent years. The principal effort is not in the direction of private charity, but the furtherance of social convictions, the elevation of the condition of the less fortunate classes, and the creation of means of recreation, etc. No form of work which can be useful is alien to the settlements; and so they have care of children in kindergartens and nurseries, care for youths, provision for sports, play grounds, clubs and places of recreation. The chief feature of the work is that persons who are disposed to render such service reside in the neighborhood which they wish to serve, and pursue the purposes of the settlements by working, not only on the people, but, above all, with them. During recent years the movement has gained in solidity and clearness of purpose. In the report which the college settlements association issued for 1900 there is an explanation of the work from its beginning, and of the views with which the pioneers of the movement undertook the enterprise. These persons not only wished to work together with the poorer classes, but also in a spirit of devotion to leave behind them a good part of their former comforts, to live more simply, and to set a good example. There has been a complete change. The helpful disposition remains, but the purpose of identifying themselves almost entirely with the life and conditions of the

poorer classes has almost disappeared. On the contrary, it is now thought that the work can be better accomplished by means of suitable and comfortable home surroundings. At the same time it is a peculiarity of the more important settlements which stand in direct connection with the universities, and therefore are called university settlements, that they become schools of social service. The report from New York says:

"We seek before all to convince the people who come to us that they must first learn the conditions under which the poorer classes live before they attempt to change those conditions. So they learn by experience both the major points of the enterprise, the social field on which they labor, and the psychological and ethical purpose which characterizes the undertaking."

The settlement generally keeps aloof from poor relief and charity, although it lies in the nature of the case that in the attempt to give social help many cases are encountered in which a condition of extreme poverty must be relieved. This work is handed over to the public and private organizations which exist for this purpose. The settlement itself wishes to help others who are independent of poor relief, to spur them to self reliance, and to aid them in creating social conditions which will furnish the basis of independence and self support. A characteristic phase of the movement is the predominance of the feminine element in the work, the administrative committee of the settlements association being entirely composed of women, and even in the university settlements the women are in the majority.

THE DRINK PROBLEM.

BY THOMAS DAVIDSON CROTHERS.

[Thomas Davidson Crothers, professor of nervous and mental diseases in the New York school of clinical medicine, became assistant professor of the practice of medicine at Albany medical college in 1871; becoming assistant physician in the New York state inebriate asylum in 1875, he has since made a specialty of inebriety, and since 1880 has been superintendent of the Walnut Lodge hospital for the treatment of alcohol and opium inebriates; he is editor of the *Journal of Inebriety*, a quarterly journal for medical study of inebriety and he is generally regarded as the leading American authority on this subject.] Copyright 1900 by Brooklyn Ethical Association

Some general conception of this problem may be obtained from the single statistical fact that in one year over half a million persons were arrested in this country charged with intoxication and petty crimes associated or following from inebriety. It is a reasonable assumption that at least half as many more persons used spirits to excess that did not come under legal notice. If to this be added the opium, chloral, and other drug takers, the numbers will reach enormous proportions. Admitting the possible errors that may exist in such statistics, there are many facts and reasons for believing that the extent and fatality of the drink evil are more serious and of greater magnitude than have ever been represented. Personal observation in almost every town and community confirms this; and each year the nature and extent of this evil become more and more prominent.

There is apparent in the public mind a growing sense of danger which is manifest in temperance agitations and various efforts to neutralize and break up this evil. This feeling of alarm has concentrated into various great crusade movements and organized societies, with a vast machinery of county, state, and national divisions. A political party fully organized is in the field, with the central object of obtaining power to control and break up this drink disease. Great church societies are urging moral means and remedies for the same purpose. Revival orators are holding meetings and creating a public sentiment of alarm in all parts of the country. In this country and Canada there are eighty newspapers and magazines published, weekly and monthly, exclusively devoted to

this cause. Books, pamphlets, sermons, and tracts, almost without number, are coming from the press constantly. A literature that is sensational and aggressive is scattered in all directions.

With this increasing agitation, apparently, the sale of spirits is increasing; and many persons are confident that inebriety is also increasing. Statistics undoubtedly show that the fatality, injury, and losses following the use of alcohol have increased far beyond the growth of population.

There is a deep psychological meaning in this which indicates the movement of unknown laws and forces above the confusion and roar of agitation. If we take a higher point of view, this problem appears to be one of the great natural eliminative processes in the evolutionary march of the race. Here the armies of inebriates, the weak and defective, and those who resort to alcohol, and are unable to adapt themselves to the changes of life and environment, are driven out as unfit—separated and crowded out by the larger, stronger types of the race. This view is sustained by the history and appearance of the drink victims in every community. From both inheritance and neglect, they bear physiological and psychological marks of degeneration. Even those who deal in spirits show the same signs and indications.

It is an interesting inquiry where this army of inebriates began; what point in the march have they reached at present, in what direction is their movement, and what laws and forces are controlling and shaping their course?

The use of spirits can be traced back to the infancy of the race and has ever been associated with its ignorance, weakness, and disease. While it has followed the march of humanity from the lower to the higher, from its infancy up through all stages of growth and development, it has manifested a peculiar movement of its own. Thus, in some ages, it has been very prominent, creating alarm and attracting the attention of historians; then it has declined and been unnoticed. Then it has come again into prominence and disappeared as before. This very significant tide-like movement has extended over the drink history of centuries, and has followed in some unknown way the great convulsions and

revolutions of nations and races. In modern times it is traceable in the statistics of courts where inebriety is punished, and points to the operation of laws at present unknown. This oscillatory movement of inebriety is receding, and appears to be governed by growth and mental vigor of the race.

Up to the last century the use of spirits was almost universal. Total abstainers were very rare and excessive use was common and unnoticed. Nearly all authorities agree that the inebriety of the past was not marked by the delirium and frenzy of modern times. The less sensitive brains of our ancestors became early palsied from spirits, and they suffered from dementia and death. At banquets the standard of strength was ability to keep awake while drinking spirits. Men used spirits and became stupid, and continued to drink for a lifetime, or until death from some acute or epidemic disease. Little or no reference is found in medical histories to alcohol as the cause of insanity, epilepsy, or idiocy, or, in fact, as the cause of any disease. Any excessive or fatal use of spirits was explained as the result of vice, free will, or demoniacal influences. The common people drank the coarser and heavier spirits, and the wealthy drank wine and light alcohols.

Evidently the excessive use of spirits in all classes has slowly declined with the increase of knowledge and progressive development of the race. The drink evil has followed the race march as a shadow in outline, generally growing less and less distinct up to the last century. From that time it has appeared in a new form. The old time stupor from the effects of spirits has changed to delirium, delusions, and crime symptoms. Mental exhaustion, insanity, and acute brain and nerve degeneration have become prominent in most cases. Moderate drinking is becoming more and more impossible. The moderate drinker of to-day becomes the inebriate of to-morrow, and dies the next day of acute disease, or is laid away in some asylum.

The type and forms of inebriety have changed. The developed brain of the modern man is more acutely sensitive to alcohol, and is more likely to find in spirits a relief from the mental strains he is subjected to. The drink evil has become

a mental disease, an insanity whose origin, progress, development, and decline can be traced and studied.

This fact was unconsciously recognized at the beginning of the 19th century in the organization of societies and efforts to break up and combat its influence. The drunkenness of the past appeared in a new light, and with it came the growing faith that it could be removed and prevented. From the first temperance society in 1816, with eight members, down to the present, there has been a steady increase of efforts and means to check and prevent inebriety. The armies of total abstainers and temperance reformers have rapidly increased; and literally no topic of civilization is more widely discussed to-day in all circles of society.

Although statistics may show an increase in the sale of spirits proportionally greater than the increase of the population, and the number of persons drinking may appear to be larger for a time in certain sections, yet a wider study, extending over a series of years, will show that this drink army is disbanding and disappearing. The tide-like oscillation of inebriety to which we have referred is often traceable in temperance revival movements which spring up suddenly and disappear mysteriously; or, in other words, inebriety increases up to a certain point and then recedes. The retrograde movement begins when the highest level is reached in sudden temperance reformatory efforts which go on with intensity for a time, then die away abruptly.

Through all this, the same eternal laws of evolution are moving the race upward and outward, and crushing out the defectives and all who are or may become incompetent and unfit to bear the burdens of humanity.

It is startling to find that through all this movement and agitation there has been no change in the theory of the nature and character of inebriety. This drink problem has changed in form and prominence, and is the central topic of thousands of moralists, reformers, and philanthropists, and yet the same theories of a moral origin, the same explanations of a heart deceitful and desperately wicked, the same story of vice and moral depravity, are repeated and accepted as the true explanation of its character and causes. All the literature and

the remedial efforts to check and prevent inebriety are based on such theories. All physical agencies in the causation are unrecognized, and nothing but the moral weakness and the wicked impulses of the victim are supposed to be active causes. Such are some of the facts which appear from a general study of the drink problem of to-day.

If we ascend above the conflict and agitation of the present and lose sight of all such theories, a different view appears. The drink army stretches away before us like a river, with a resistless onward sweep beyond the uncertainties of human will and the feebleness of human effort. To understand this, we must go back to the sources, to the springs and streams and causative influences which have accumulated and united in forming this drink current. This is done by a careful study and grouping of the histories of a large number of cases. The conclusions from such a study by many observers agree that heredity is the most prominent cause and is present in over eighty per cent of all inebriates.

This heredity includes the degenerations which are transmitted from consumptive, insane, idiotic, epileptic, hysterical, and other nervous diseases, together with alcoholic and moderate drinking ancestors. Inebriety may be the direct legacy of any of these diseases, and especially from alcoholic and drug-taking parents. If drunken children should not follow from inebriate parents, some other of these allied forms of disease is sure to appear, either in the first or second generation. The drink craze is a symptom of physical degeneration and tendency to early exhaustion, and a hint of the incapacity of the brain to regulate and continue the vital processes along the lines designed by nature.

Parents who use alcohol are literally crippling their children, lessening their vigor and the possibility of living natural lives. Thus parents are literally trustees to receive and transmit to the future the germ form and force. If they fail by neglect or ignorance, they come into conflict with inexorable laws which punish by pain, suffering, and extinction. This army of inebriates are, to a large extent, the product and result of the diseases of their ancestors—a reflection of the physical and mental degeneration of the race that has passed away.

The use of wine at meals, defective nutrition, ungoverned appetites and impulses, neglect of healthy body and brain exercise, break out in the children in inebriety or some allied disease with almost absolute certainty. It is our physical sins and diseases of to-day that are preparing the ground for all sorts of nerve diseases and inebriety in the next generation. It is our failures, neglect, and weakness that are transmitted in low vitality, defective power of resistance, and tendency to disease, making every condition favorable for a short, degenerate life and early death.

The free will we urge these poor inebriates to exercise only existed in their ancestors. They alone could have diverted and changed the currents of health and made free will possible in the children. The hereditary inebriate is born into the world with a low power of vitality and states of central brain exhaustion which are ever seeking relief; and alcohol, by its narcotic action, supplies this demand. This impulse to degeneration may pass down one or two generations before appearing as inebriety again.

No other disease is more positively transmitted than inebriety, either directly or indirectly, in some associated disease. A study of heredity reveals a most startling view of the forces at our command to change and prevent the inebriety of the future. In the good time coming, not far away, this field will be occupied by practical scientists, and we shall be able to break up this great polluted spring and stop the tide of disease which follows.

Another active factor more apparent and controllable in the problem of inebriety is that of marriage. At present indiscriminate marriages are largely influential in intensifying and continuing this alcoholic stream. The assertion that inebriety is bred and cultivated by indiscriminate marriages can be proved in the experience of every community. Stockmen, who have only the most selfish interests, act on an analogous fact, and avoid raising defective stock by the selection of the strongest and best types for the continuation of the race. Our neglect to recognize this great principle of nature is seen in the common marriages of many persons who are literally human wreckage and remnants of a race stock approaching

extinction. Criminals, paupers, inebriates, and others notoriously far down on the road to dissolution, are permitted to marry and raise children freighted with a truly frightful legacy of degeneration. The dangerous classes of every community, the inmates of hospitals and asylums, are the living witnesses of this blunder.

Higher up in the social scale unions are constantly taking place, the progeny of which must be defective and incapable of living normal lives. Were it not for the higher laws of nature, which continuously throw out and exterminate these unfit, the race would soon be doomed to helpless degeneracy. The children from these dangerous marriages are so far crippled as to be unable to live normally and in accord with the laws of health, and hence become diseased and subject to the laws of dissolution.

One of the saddest facts in the history of these degenerates is the very common sacrifice of noble women, who marry them under the delusion that they are suffering from a moral disorder which can be reached and cured by love and sympathy. The marriage of chronic inebriates on this principle is a crime and offense against the highest laws of humanity, that should be punished by the severest penalties. In the near future the state will recognize this fact in its laws. It is this defective heredity, increased and intensified by marriages with equally bad stock, that is the great fountain spring from which inebriety comes.

There are other active sources from which inebriety springs that may be seen in every community. Thus starvation in childhood by overfeeding and underfeeding is followed by defective nutrition and growth, and finally by inebriety. Degenerations and defective growths from diseases of childhood slumber along to the period of maturity, then break out into inebriety from the slightest exciting causes.

Injury of the brain and nervous system in early and mature life, such as sunstroke, shocks, blows, and diseases which are attended with delirium and unconsciousness, often develop into inebriety. Want of rest, strains, and profound drains of the body bring on exhaustion and changes in the nerve centers that are often manifest in inebriety. The moment

alcohol is taken in large quantity a tremendous activity and concentration of degenerative forces begin.

Alcohol, of all drugs, seems most to intensify and provoke disease, and to afford the most favorable conditions for the destruction of cell and nerve tissue. The incline to acute disease and final death which follows the use of spirits is sharp, and the rush downward is rapid and deceptive. The history of a large number of these cases points to the same symptoms, the same progress, direction, and termination.

Like a river springing from certain sources and moving on down, diverted here and there by rocks, mountains, banks, and islands, so this drink stream changes and winds about, but always passes the same sections with the same course, and always reaches the same ocean. It is a startling fact that inebriates are literally a new army of the insane, which have sprung up and camped all along the frontiers of modern civilization.

One of the most unaccountable facts of this drink army and problem, notwithstanding all the agitation of means and methods for relief, is the saloon, its support and defense by the public. Every where, for the mere formality of a license, saloons are permitted and encouraged for the sale of spirits, under the most attractive conditions and surroundings. Art, luxury, comfort, and elegance combine to make these places attractive resorts; mirrors, flashing glass ornaments, colored liquids, pungent odors, are arranged to create thirst and stimulate the sense of taste.

Thus the senses are appealed to in the most powerful way to use alcohol in all forms. As a result, the saloon has become a terrible power over the minds and conduct of a vast number of weak, defective persons, whose mental and physical health it breaks up and destroys. Nothing can be more certain than this fact. In every community, under all possible circumstances, the saloon is destructive, antagonizing every effort to struggle from the lower to the higher, and every law of growth and development. Why should the saloon be tolerated a moment in any intelligent community? Whenever the dangers from the use of alcohol are even partially realized, why should not the saloon be the first object of at-

tack? What right has the saloon to exist? What right has it to peril every interest of law and order?

The answer is to be found in the same old realm of superstitious theories that cling with deathless grasp to the public mind; theories of the food value of alcohol, and its moderate use as favoring longevity and happiness—these are the real supports of the saloon.

The saloon is the real schoolhouse for the cultivation and development of inebriety, and is the most dangerous disease center that can exist in any community. The only word that can be said in its favor is that its real power is eliminative—it hurries on the process of dissolution in the individual. It makes all its patrons unfit, and then speedily drives them down to death and extinction. It destroys the individual by switching him from the main line on to the side track, ending in destruction. It will be the wonderment of the future that the saloon should exist so long, with nothing but the densest and most criminal ignorance to support it. Alcohol must be recognized in its true character as a medicine, and used in the same way as arsenic or strychnine. These are some of the facts that are not understood practically, that are not studied in the temperance literature and lectures, and are literally unknown even to the poor drink victims.

There is a psychological factor in this problem that is still more obscure and startling, and yet it enters very minutely into the practical solution of the question. It is the unequal growth and decay of the several brain faculties in each individual which come into prominence from the use of alcohol.

From heredity, disease, starvation, injury, and other complex causes, certain parts of the brain undergo degeneration or are undeveloped. Some parts become atrophied or shrunken; others are enlarged into abnormal proportions. As a result, some faculties seem highly developed, others are exhausted early, and an abnormal mentality follows in both cases. Inebriety is a symptom of this abnormality. It indicates that the brain faculties are disorganized and out of harmony. The natural adjustment is broken up either temporarily or permanently. The two most commonly observed

faculties which diverge most widely are the moral and intellectual senses. Often these are at different levels in the same individual. In the alcoholic victim the moral sense suffers first and is always the most diseased. The inebriate may have a complete palsy of this sense, and yet have all the other faculties fairly acute or so slightly deranged as to be unnoticed. This moral or ethical sense is the highest perfection of character, and always degenerates rapidly in all persons who use spirits to excess. The capacity to think right and act right is blunted, palsied, and destroyed, while the intellectual sensibility may be apparently unimpaired. This inability to adjust conduct ethically is the direct result in many cases of the paralyzing action of alcohol. No doubt in some instances this faculty was very feebly developed before spirits were used, or it may have been wanting altogether. In that case the degeneration from alcohol makes all efforts to build this up impossible.

The practical bearing of these facts is illustrated in many ways, particularly in the failure to restore inebriates by appeals to their moral sense alone. The influence of the pledge and prayer on persons who have no sense of duty or moral obligation is almost useless. Often such persons have an intellectual sense keen enough to take advantage of the circumstances and exhibit a cunning characteristic of criminals, passing as reformers and martyrs, and arousing interest and enthusiasm only to profit by it in some unusual manner.

In this way temperance revivalists, by passionate appeals to the moral and emotional senses of inebriates, may secure thousands of pledges and conversions to a life of total abstinence, followed by relapses startling and unexplainable. The moral or ethical sense of this new army of inebriates is paralyzed or destroyed, and efforts directed to this side alone are worse than failures.

The only road possible to reach this class of cases is by the physical, by the use of means and measures that appeal to the entire organism. The degeneration of brain cells, nerve tissue, and organic forces, combined with defective and diseased moral and ethical senses, presents a condition of individual disease that seems difficult to cure. This fact

opens up a new field of effort and suggests a different class of means and remedies. The question arises, Can we halt this army and turn it into other paths? Can we stay this tide of destruction and the terrible losses which follow from it? Can we solve this problem and stop its evils?

Appeals to the moral nature of the inebriate are useless, because that part of the brain is palsied. Intimidation by punishment and suffering fails for the same reason. The pledge is powerless because the will is unstable and incapable of consistent action. The prayer fails because the emotional nature is incapable of permanent impressions. Thus education, morals, law, and religion are powerless to remove or check this disorder.

The inebriate is literally a madman, who persists in destroying himself at all hazards and irrespective of all interests of his relatives, friends, and the community. Such conduct forfeits all right to personal liberty and makes him an outlaw and an antagonist to all the highest interests of society. Any one who persists in drinking to intoxication is dangerous and may at any moment peril the interests of individuals or the community he lives in and commit acts of very serious consequences. He should be restrained and be confined in a hospital, where his conduct can be regulated by others.

Rev. Dr. Bellows said long ago in an address on this subject: "No man has the right to peril the interests of others. Society learns nothing by tolerating the presence of any one whose liberty is dangerous. Society gains nothing by holding for an hour any one who is fit to be at large. Liberty and human rights gain nothing by allowing any man to be at large for a moment who is destroying himself, his family, and neighbors. All we need is what we are fast gaining a possession of—the tests and gauges of this fitness or unfitness."

The true remedy is a united public sentiment that this army of inebriates are diseased and dangerous, and the highest interests of society require that they should be quarantined and their personal liberty restricted, not as criminals for short sentences in jails, not as willful sinners, to be helped or cured by fear, suffering, and the law of vengeance, but as diseased and helpless people needing guardianship, medical care, and

the direction of others. Like cases of mania, smallpox, typhus fever, and contagious diseases, they need isolation and treatment in special surroundings. We want a clear public recognition of these facts; then means will be adopted to prevent the victim from going on to chronic stages before any efforts are made to help him.

The legal efforts to cure this evil are more fatal and dangerous than the saloon, by increasing the very evil they seek to remove. Thus saloons are licensed and protected, and, both directly and indirectly, the use of spirits is encouraged and made attractive. The victim is excused and tolerated until he reaches a chronic stage, and violates some law; then he is fined and imprisoned under conditions that intensify and increase his disease. Statistics show that ninety nine per cent of all victims who are punished by the courts the first time by fines and imprisonment relapse, and appear again and again for the same offense as long as they live. They receive the name of rounders, and are not infrequently sentenced hundreds of times in the course of years. The station house, jail, and machinery of law, from the absence of physical and mental aids, are fatal in their influence.

Yet public sentiment hugs this terrible delusion of vice, and sustains the police courts in efforts that make it more and more impossible for the victims to recover. Thus the law destroys the inebriate by punishment as a criminal, and the church disowns and drives him away as a sinner; society looks down upon him as having a vice that can be controlled at will. It is the same old superstitious theory of a theological or moral origin of evil, which from time to time has been used to explain every phenomenon of nature, that sustains and keeps up this delusion.

Science has opened up a new field of remedial forces, and points out a solution of this drink problem, in special hospitals organized as industrial military schools. Here the inebriates may be housed and kept for a lifetime if they are incurable. These hospitals are to be organized with every means to build up both body and mind, to protect the victim from himself, and to provide every hygienic and physiological agency requisite for a normal life.

Laws should be passed authorizing the arrest of any one known to be drinking spirits continuously or at intervals. There should be no waiting until the victim is intoxicated or commits some overt offense. He should come under legal control as soon as evidence of his habitual use of spirits can be obtained. Thus all classes, from the poor pauper to the rich man or his son, who are in the early stages of inebriety, should be forced into conditions of sober, rational living, and continued under legal restraint, either in an asylum or out on parole, until their mental and physical health is restored and evidence of temperate living can be established.

If such asylums were in operation and such laws in force, supported by public sentiment, this army of inebriates would disappear from our streets, and with it the crime, losses, and suffering so apparent. The saloons and distilleries would pass away in obedience to a higher law than legal prohibition.

This is the voice of science: to quarantine the inebriate in a hospital, as if suffering from a contagion; to stop the disease at the fountain, to remove the victim from all causes and conditions favoring inebriety. If the inebriate is curable, he can be restored to health and society again; if not, he should remain a ward of the state, and be kept under conditions most favorable for health and the public good.

Industrial hospitals for this army of inebriates can be built and supported by a tax on liquor dealers, and thus relieve the producer and taxpayer. To a large extent, after they are established they can be made self supporting. The general principles and many of the details of these industrial hospitals are already practically worked out in most of the asylums, prisons, and reformatories of the country. The Elmira reformatory and many of the present inebriate asylums are literal demonstrations of this fact.

In a wider sense, this solution of the drink problem promises not only to house and check the present evils, but to place these victims in the best possible conditions for scientific study. Here the great underlying causes—physiological, psychological, and sociological—which have developed and set apart this vast army of what has been aptly termed borderline maniacs can be discovered and understood. There is no

way to comprehend inebriety except from exact studies of inebriates in the most favorable surroundings.

It is something more than the impulse to use spirits to excess, more than a weak will and moral carelessness, which is the cause of inebriety. This disease is beyond cure by punishment or appeals to the emotions, beyond educational and religious influences, beyond remedy by license and prohibition. Back into these silent realms, where the great natural laws of evolution and dissolution move in a majestic sweep, there we shall find its causes and the means of relief.

Declaring the inebriate diseased and restraining him in special asylums for cure is not a new theory of modern times, but has been urged and discussed for over two thousand years. But, like all other great truths in the world's history, it has waited for an audience and a favorable time for acceptance. That time is rapidly approaching, and the principle is already recognized by an increasing number of scientific men in all parts of the country. The state of Connecticut has passed laws for the organization of such a hospital. Bills have been introduced in many of the state legislatures for this same purpose, but the opposition of moralists who still cling to the vice theory has so far prevented any practical work.

Empirics and charlatans, ever eager to profit by the half defined truths just dawning on the mental horizon, rush in with claims of secret specifics for the cure of inebriety, arousing enthusiasm among the poor victims and creating expectations that will only end in disappointment. This in itself is an unmistakable sign of the rapid growth and evolution of the real truth, which is now passing through the empiric stages.

We must have hospitals in every city and town for inebriates: First, for the paupers and criminals, the saloon loungers, and those who are constantly before the police courts for offenses of all kinds associated with excessive use of spirits. This class must be committed for five or ten years, or on indeterminate sentences depending upon their improvement and restoration, under certain conditions being permitted to go out on parole. Hospitals for their retention must be organized in the country, on large farms, where all the inmates should be required to work every day at some profitable em-

ployment, according to their capacity and strength. All the conditions of life and surroundings should be regulated with military exactness. All sources of debility and degeneration should be removed.

Nutrition baths, healthful surroundings, exercise, mental and physical remedies to build up and restore all the energies of the body, should be enforced. Rest, in the highest sense of change and growth, should be favored by every means known to science, and all acts and conduct should be under the control and guidance of others. Each man should be organized into the working force of the hospital, made a producer in some way, and kept in training not only for the purpose of self development, but also of increasing the value and usefulness of the institution. If he shows capacity, or can do more than become self supporting, the surplus thus earned should be credited to him or his relatives.

The possibilities are almost unlimited along this line. Vast numbers of inebriates, if they could be restrained from the use of spirits in such institutions and given medical care and work in the best conditions of health, would become active producers and support their families besides. After a long period of medical and institutional care and training, such cases would be restored, and in many cases become useful citizens. If after repeated trials on parole they should continue to relapse, their commitment should be permanent. The incurables would thus be placed in the least harmful and most humane and economical conditions of life. The present losses and contagions which follow this class would be prevented. The crime, insanity, pauperism, and disease centers which are always found associated with them would disappear.

Hospitals must be provided for a second class of persons who are not so far down the road to final dissolution. Inebriates who are constant drinkers or who have periodic excesses, and who keep up the delusion that they can stop any time and are not so bad as their friends represent—such persons are literally an army of exhausted, brain toppling drinkers, who are on the verge of insanity, crime, suicide, and sudden death. These should be committed to hospital care, the same as others. The same military control of exact obedience

and exact living—exact use of all means and appliances; every hygienic, physical, and mental remedy known—should be applied to build up and restore them to temperate living. The terms of confinement should be shorter, and the remedies suited to recent cases. Employment should be required of each one, and, if able, they should pay for their care in labor or otherwise.

A third class of hospitals would be required for wealthy and recent cases. The general plan would be as before: military care and training, with nerve and brain rest. The same special object would exist, to ascertain the conditions and causes which provoked the inebriety, and remove them; also to build up the entire man to resist and overcome these disease impulses in the future. To this can be added all the moral forces of prayer, faith, and conversion, together with every possible stimulation of the higher brain centers. The application of such remedies where the physical health and surroundings are the most favorable would be followed by the best results.

The study of inebriety in these hospitals would reveal many of the great underlying causes and laws which are active in producing this drink evil. The power and influence of the saloon and unregulated marriages would be seen and realized.

We have arrived at a period where all phenomena of loss, suffering, and evil must be regarded from a physical point of view. They are the results of tangible causes that may be known and understood. The drink phenomena and problem must be solved along this line.

If we consider the great evolutionary principles which underlie and control all these movements of individuals and races, this subject appears in a new light. All students of science understand that disease and degeneration, either inherited or acquired, come under the operation of great natural laws which may be studied and understood.

Degeneration, disease, and premature death are conditions that are preventable beyond the wildest dream of the enthusiast, but along lines that are yet to be discovered. Already the possibility of averting insanity, idiocy, criminality, pauperism, and other afflictions, looms up like the mountain

ranges of a new continent that is yet to be explored and mapped out. The armies of inebriates are the same degenerate, diseased victims, who become unfit, disabled, and sorely wounded, and are left on the field to die. In our ignorance we fail to realize this, and join in the delusion that they are yet to do battle for civilization.

The laws of elimination go on crowding them out every where, and the losses and injuries they inflict on both the present and future generations are great obstacles to the survival of the fittest. Here nature is teaching the true remedy in the elimination and separation of those unfit, and hurrying them on to death by insanity, criminality, and various allied degenerations: the grinding, crushing battle of civilization; the struggle of man upward and outward, with its exposure, its strains and drains; its shot and shell, wounding, crippling, and disabling; and its force of hereditary injuries, coming from the past and reaching out into the future. This is the struggle along the front line, in which over a million of poor victims are engaged.

Nature separates, eliminates, and destroys. Science teaches that separation and isolation may be followed by restoration. The same laws and forces which accelerate dissolution may be turned into currents of evolution. This army of inebriates can be halted and forced back to the rear, and diverted into conditions of growth and development. Already the polluted springs of heredity and the recruiting stations of the saloons and unregulated marriages are apparent. Already there are in sight vast ranges of causes and conditions that can be utilized and sent into practical operation for the prevention as well as the cure of inebriety.

TENEMENT HOUSE REGULATION.

BY ROBERT W. DE FOREST.

[Robert Weeks DeForest, lawyer; born New York, 1848; graduated Yale, 1870; admitted to New York bar 1871; general counsel since 1874, and vice president since 1902 of the Central railroad of New Jersey; president of the Charity Organization society since 1888, organizer of the first philanthropic pawn-broking establishment in America; chairman of the Tenement Commission of New York since 1900; president of the Municipal Art commission of New York, 1905.]

Copyright 1903 by American Academy of Political and Social Science

When Theodore Roosevelt, then governor of the state of New York, attended the opening of the tenement house exhibition of the Charity Organization society of New York, and looked over the models of tenements, old and new, and the charts which showed the close connection between the housing of the vast majority of that city's population and health, pauperism and crime, he said to the few of us who had organized this exhibition: "Tell us at Albany what to do, and we will do it." The result was the New York State Tenement House commission of 1900, the enactment last year of the most advanced code of tenement house laws as yet put in force in any American city, and the creation for the first time in this country of a department directly charged with the oversight of the construction and proper maintenance of tenement houses.

The tenement house problem we had to meet in New York was the most serious of any city in the civilized world; for in New York, according to the last census, out of 3,437,202 inhabitants, 2,273,079, or more than two thirds, lived in tenement houses, and there were 82,652 of these tenements in the city.

The interest in this particular phase of the housing question is not confined to New York. No one who has followed, even carelessly, public opinion on this subject can fail to realize the hold it has upon the public conscience. It may be that some tremble at the effect upon their own fortunes of a possible social revolution, and seek to protect themselves, for their own sake, by trying to make what they call the lower classes more comfortable in their homes. But the large body of men and

women in this country who are giving attention to this subject, are doing so from love of their fellow men, and an earnest desire to give them in their homes some of the healthful surroundings and comforts they enjoy in their own.

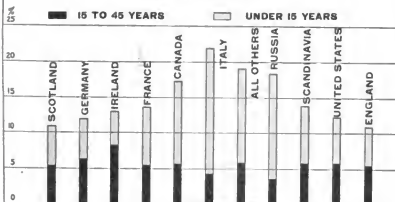
There are few large cities in America in which there is not some tenement regulation, and some agitation for its extension; nor is this activity confined to the larger cities. Kansas City in the west, Hartford in the east, Yonkers, Syracuse and Rochester in New York, are already moving in the same direction, and the subject is receiving close attention in Washington, Cleveland and Pittsburg.

The New York law of last winter was a state law, applicable to all cities of the first class. It included Buffalo as well as New York, and Buffalo did its full part in securing the enactment of the law. Philadelphia is emphatically the city of homes, and not of tenements. Fortunately for Philadelphia, its working classes are almost exclusively housed in single family dwellings. It has, as most of you know, an admirable code of tenement house laws, which has proved very useful to us at New York in preparing ours, and it has its Octavia Hill association to advance the cause of housing reform.

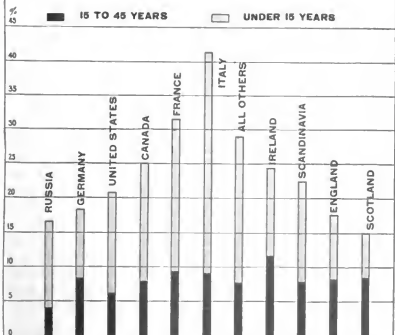
In some quarters benevolent people are proposing to build model tenements. That is good as far as it goes, but if at the same time other people, not benevolent, who have no motive but gain for themselves, are permitted to build tenements which are not models, the extent of progress is very limited. What we must do, first and foremost, is to secure proper legislation, using that term in its broadest sense, to include city ordinance, as well as state law. Legislation to regulate building, so as to secure for new buildings proper air and light space and proper sanitation; legislation to regulate, in buildings old and new, their maintenance so that health conditions may be improved and at least not be impaired; legislation, moreover, that provides the means for its own enforcement, by proper inspection.

Most of us have been brought up to believe that, as owners of real estate, we could build on it what we pleased, build as high as we pleased, and sink our buildings as low as we pleased. Our ideas of what constitutes property rights and what con-

DEATH RATE IN RURAL DISTRICTS PER 1000 INHABITANTS



DEATH RATE PER 1000 OF POPULATION IN CITIES



stitutes liberty are largely conventional. They vary with time and place. They are different in different countries. Liberty, proper liberty, to-day, may, under changing conditions, become license to-morrow. I came home from Europe not long since with a French friend, who had gone home to his native country to take possession of his ancestral estates. He told me of having found the trees grown up quite thickly around his father's country home, and of the difficulties he had encountered in obtaining permission from the public authorities to cut down some of them, which was finally only granted on condition that he replant elsewhere. That his trees could only be cut down with the consent of the public authorities, and that he could properly be required to replant elsewhere as a condition of obtaining that consent, seemed to him a part of the eternal order of things. He no more questioned it in his mind than we, who live in cities, question the propriety of obtaining from the city building department a permit to build, based upon approval of our architect's plans.

Lecky, in one of his later books, speaking of sanitary legislation, says: "Few things are more curious than to observe how rapidly, during the past generation, the love of individual liberty has declined; how contentedly the English race are committing great departments of their lives to the web of regulations restricting and encircling them." It is not that love of liberty has declined; it is that the English race are meeting new conditions with the same genius with which they have evolved their great system of common law. Living, as most of them did a century ago, in separate houses, and in small villages or towns, every man could build as he pleased and could maintain his building as he pleased without seriously endangering the liberty of his neighbors; but with the steady movement of the population from the country to the city, and the marvelous growth of cities, not only horizontally but vertically, new conditions must be met, and the property rights and liberty of one neighbor must be limited to protect the property rights and liberty of another. If a man built an isolated house in the country, without light or air for the bedrooms, and kept it in such filthy condition as to breed disease, it is a fair question whether his liberty should be infringed by

any building or health regulation. He may be fairly left free to suffer the consequences of his own misuse of his liberty. His death, and that of his family, from disease so caused may, as an awful example, do more to advance civilization by making his neighbors more careful, than would his life and theirs under enforced sanitary regulation. But if that same man is separated from you and me only by a board partition or twelve inch wall, and our families meet every time they go into the street or into the back yard, his liberty must be restricted in some degree in order to enable you and me to enjoy ours.

How and why has tenement house law been evolved in American cities? In the same way in which the Anglo-Saxon mind deals with any such problems. Just as it evolved common law, and for the same reasons. First a case—that is, an evil—to be remedied; afterward a decision—the application of the remedy, and the establishment of a principle or law by which similar evils shall be remedied. It is not according to the genius of our race to provide the remedy in advance of the supposed disease. Better be sure that the disease really exists, even if some few die from it, and then provide the remedy which will be sure to meet actual conditions, than to burden the community with advance remedies for diseases that after all may prove to be imaginary. Even if the disease be not imaginary, such remedies are apt to be worse than the disease itself. Thus, in Anglo-Saxon countries, a conflagration has usually preceded precautions against fire, and the evils of sunless, airless and unwholesome tenements have preceded any attempt to prevent these deplorable conditions. Eventually we act, and when we do we act practically.

It may be well to define what is meant by a tenement house, for without definition there is infinite confusion in the use of this term. In one of the recent civil service examinations in New York, a candidate, evidently learned in the law, or supposing himself to be so, defined it as being "that which is neither land nor hereditament." It has its popular and its legal meaning. Popularly, it is used to designate the habitations of the poorest classes, without much thought of the number of families living under any particular roof. The National Cyclopedia significantly says: "Tenement houses, commonly

speaking, are the poorest class of apartment houses. They are generally poorly built, without sufficient accommodation for light and ventilation, and are overcrowded. The middle rooms often receive no daylight, and it is not uncommon in them for several families to be crowded into one of their dark and unwholesome rooms. Bad air, want of sunlight, and filthy surroundings work the physical ruin of the wretched tenants, while their mental and moral condition is equally lowered. Attempts to reform the evils of tenement life have been going on for some time in many of the great cities of the world.'

Legally, tenement is applied to any communal dwelling, inhabited by three, or in some cities four, or more families, living independently, who do their cooking on the premises. It includes apartment houses, flat-houses and flats, as well as what is popularly called a tenement, if only built to accommodate three, or as the case may be, four or more families who cook in the house. It is in its legal sense that I use the term. At first blush it may seem objectionable to class apartment houses, flat-houses and tenements, so-called, together, and subject them to the same code of regulation. Practically, it has never been possible to draw any line of separation between different houses which are popularly designated by these different words. Nor has any one ever suggested any regulation proper for the poorest tenement, using the word now in its popular sense, which would not be voluntarily, and as a matter of self interest, complied with in the most expensive apartment house. Nor is there any certainty that what to-day is popularly called an apartment house may not to-morrow, in popular parlance, be a tenement of the worst kind. My own grandmother, within my own recollection, lived in what was then one of the finest houses in one of the most fashionable streets of New York. Not long since I passed the house, and noticed on the front door a sign reading, "French flats for colored people."

In its earliest form (and many cities have not yet passed beyond the first stage) the tenement was a discredited private house or other building, not originally built for the occupation of several families, but altered for the purpose. Each floor of what was originally a private dwelling was changed so that it

could be occupied by a family. Later on—it may be at the beginning—each floor was subdivided between front and rear, so that it could be occupied by two families. One of the chief evils of such tenements arose from cellar occupation, and consequently some of the earliest tenement house regulations relate to the occupation of cellars.

In its second stage the tenement house is built for the purpose, imitating, not infrequently, in a servile manner, the arrangement of the altered house, with its dark rooms, and only gradually being adapted to a new architectural form growing out of its special use. The introduction of running water and city health regulations made it possible and desirable to locate water closets inside. Courts and air shafts increased in size. Fortunately, the process of evolution is not exhausted, and is still going on.

The tenement is still regarded in many places as an exotic, not adapted to our climate. But, judging from the history of New York and other cities, west and east, the tenement house has come to stay, and is, perhaps, destined to crowd out other and better forms of housing. I remember well when the first tenement to be dignified by the term apartment house was built in New York. It was in the early 70's. Now it is a prevailing type of new building for dwelling purposes on Manhattan island. There were no less than 82,652 tenements in Greater New York at the time of the last census. The development of the tenement has been largely influenced by legislation intended to prevent its worst evils. To test the reason for such legislation, and to define its limitations, a brief summary of particular subjects of regulation is desirable.

Protection against fire is almost universal. Structural provisions directed to this end are contained in the building laws of all cities. In New York, Philadelphia, San Francisco, Jersey City, Providence, Syracuse and Nashville, all tenements must have fire escapes. All tenements over two stories in height must have fire escapes in St. Louis, Baltimore, Louisville, Minneapolis, St. Paul, Denver, Toledo and Columbus. In Chicago, Cleveland and Cincinnati, this rule applies only to tenements over three stories in height. In many cities tenements must be fireproof throughout when over a certain height.

In Philadelphia this is true of all over four stories; in Washington of those over five stories; in New York, Buffalo, Louisville, Minneapolis and Denver, of those over six stories in height. In Boston, the limit is 65 feet.

Light and ventilation are protected by minimum open spaces. In Philadelphia there must be open spaces at the side or rear equal to one fifth of the lot area, and the minimum width of all spaces is eight feet. In Buffalo, under the local law in force before the general state act of 1901 was passed, the minimum width of any outer court was six feet in two story buildings, eight feet in three and four story buildings, and one additional foot in width for each additional story. The minimum interior court was eight by ten. In Boston, a clear open space at the rear must be left equal to one half the width of the street on which the tenement fronts, and there must be two open spaces at least ten feet wide. In some cities the required court area is expressed in square feet, without regard to minimum width or length, and increases proportionately with the height of the building. This principle is adopted in New York, where the minimum width of exterior courts in buildings five stories high is six feet on the lot line and twelve feet between wings, and the minimum area of interior courts on the lot line in buildings of the same height is twelve by twenty four, reduced this winter in three story tenements to eight by fourteen. Such buildings must have an open yard at least twelve feet wide in the rear. The height of rooms is almost universally regulated, the minimum usually being eight feet. The height of tenements is limited in many cities.

Water supply is prescribed. In New York, water must be furnished on each floor. In Philadelphia and Buffalo, on each floor, for each set of rooms. In Boston, Chicago, Jersey City and Kansas City, in one or more places in the house or yard.

Water closet accommodation is very generally prescribed. In Philadelphia, and in New York under the new law, there must be one for every apartment. Under the old law in New York, and at present in Chicago and Detroit, there must be one for every two families. In other cities the unit is the number of persons. It is twenty persons in Boston, Baltimore and Denver; ten persons in Rochester.

The reasons for tenement regulation may be roughly classed as follows—precise classification is impossible, as it is seldom that any particular regulation is attributable solely to a single reason:

The protection of property rights in adjacent property. Such is the reason for regulations requiring fireproof construction in whole or in part. Such is the chief reason for limitations of height and for leaving an obligatory open space at the rear of each house so as to preserve thorough ventilation for the block. The protection of neighbors and the community from unsanitary conditions by which they might be affected, or which might breed contagion. Under this class falls the great body of sanitary law and tenement house regulation of a sanitary kind. That all legislation which falls within these classes can be justified as a proper restraint on the liberty and property rights of some, in order to protect and preserve the property rights and liberty of others, is clear.

There is another and increasing class of regulations intended to protect the life and health of those who can not, it is supposed, protect themselves by any means within their control. Fire escapes, which are almost universally required by law in nonfireproof tenement houses, belong to this class. There is no such regulation for private houses, and there is usually no such requirement for two-family houses. The reason for the fire escape in tenements and hotels must rest either on the supposed inability of the inmates to protect themselves, as the owner of a private house can protect himself and his family, or else from the greater number of persons exposed to risk. Of such class also is the law providing that there be a separate water closet for each apartment, as in New York, or for every two families, as in Detroit and elsewhere, and that lights be kept burning in public halls at night. No such regulations exist for private houses. They can be only justified in tenement houses on the theory that the tenants in such houses must live in them, can not control their maintenance in these particulars, and are entitled to the protection of affirmative law for these necessities or conveniences. It may be answered that they need not rent rooms in houses not furnished with separate water closets, and the halls of which are not kept

lighted, unless they wish to, and that they should not be restricted in their liberty to rent rooms in such houses, it may be at a lower rent, if they so desire. The reply may be, and in some cities would properly be, that they would have no choice unless the law intervened to protect them. Moreover, it might be urged that in the provision for separate water closets for each apartment, and in the lighting of public halls, there was an element of protection to public health and morals in which the community had an interest, and which the community by regulation should insure.

I have sought by these illustrations to point the closeness of the dividing line between justifiable restriction of the individual liberty of the house builder and house owner, for the protection of the liberty of others, and paternalism. It is undoubtedly true, as Mr. Lecky states in the concluding part of the paragraph to which I have already referred, that "the marked tendency of these generations to extend the stringency and area of coercive legislation in the fields of sanitary reform is one that should be carefully watched. Its exaggerations may, in more ways than one, greatly injure the very classes it is intended to benefit." There is real danger lest in our eagerness and earnestness to improve the condition of others, we legislate from the point of view of those fathers and mothers who are always ready to regulate the affairs of every family but their own, and break down the habit of self dependence and the spirit of individual responsibility upon which the vigor of our American social fabric so largely depends.

Perhaps the most important limitation to tenement house reform, in the construction of new tenements, is the question of cost. If tenements can not be rented at a profit, they will not be built. There are many things which it would be desirable to have in a tenement, each one of which adds to its cost; and if they be required by law to an extent which makes it unremunerative, tenement building will cease. It is undoubtedly desirable that all tenements should be fireproof throughout; indeed, the same may be said of private houses. In 1892, Boston so prescribed; but few, if any, were erected, and the law was consequently modified in 1899.

The amount of rent which the average American working-

man in any particular city can pay approximates a fixed quantity. Any legislation which materially increases this rent, or which prevents building and therefore prevents his finding shelter, is quite certain to be repealed. This proposition, however, is not so discouraging as it may appear at the outset. The standard of living among our working classes is steadily improving. What yesterday was a luxury, to-day is a necessity. In many cities, apartments which are not provided with running water are unrentable. Bathing facilities are increasingly in demand, and are frequently being provided. Families that have once lived in apartments where the bedrooms have light and air, will not hire apartments which are dark and unventilated. The supply must meet the demand. Interest rates are receding; economies in construction are being introduced, which some time ago were unknown, largely by the building of houses by the wholesale. The large profits which were demanded as the normal income on tenement houses in the past are no longer expected. Rooms up to the standard of the modern tenement house law can be provided without increasing the rental.

Another limitation in many cities is the prevailing lot dimension. If Dante were to-day writing his *Inferno*, the lowest depth would be reserved for those men who invented the twenty five foot lot and imposed it on so many American cities. In unbuilt districts, where several lots, whatever be their dimensions, can be purchased and built upon together, the lot dimension does not necessarily control the frontage of the building, and the tendency in such districts in New York is to build tenement houses of wider frontage, which admit of better court arrangement, but there are usually so many lots separately owned, and so many which are situated between lots already built upon, so that their enlargement is impossible, that any proposed legislation prescribing court areas which, however desirable, puts the prevailing lot unit at a disadvantage, will meet with overwhelming resistance.

There is another practical limitation, not necessarily to the enactment of tenement house law, but to its permanence, in the extent to which it, either actually or supposedly, interferes with the profits of builders and material men; and perhaps no

better illustration of this practical limitation can be given than a simple recital of the contest over the radical amendment of the New York law which was waged at Albany. The New York law of 1901 marked the longest step in advance that tenement house reform in that state has ever taken, though in its provisions for court areas, the particular point in which it was assailed, it does not go so far as the Philadelphia law, and but little further than the previous Buffalo law. It unquestionably increased the cost of construction by its fireproof provisions, as well as, though in a less degree, by its larger court areas. That there would be organized effort on the part of building and real estate interests to modify it was certain and inevitable. Many bills were introduced amending it, but my illustration only concerns two,—the city administration bill, in the preparation of which I myself had part, and a bill introduced by a Brooklyn member of the legislature in the interest of Brooklyn builders and material men, who claimed that they represented the people of Brooklyn. One of the prevailing types of Brooklyn tenements is a three story house on a twenty five foot lot, with two families on a floor, making six families in all, each apartment running through from front to rear. These houses had been built with interior courts or air shafts about two and a half feet wide and ten feet long. These light shafts were supposed to light and ventilate the interior rooms of each apartment. As a matter of fact, they furnished little light or ventilation to any bedrooms below the top floor. The same type of air shaft in taller tenements of Manhattan was one of the chief evils against which the new law was directed. These evils were undoubtedly less in a three story building, but still existed. The minimum interior court or air shaft permitted by the new law in such buildings was eleven feet wide by twenty two feet long. Such a court prevented the building of this type of house, and no tenements of this type were consequently built on twenty five foot lots from the time when the law went into effect. The Brooklyn bill sought to amend the law, as respects three and four story houses, by permitting a return to the old air shaft, with an increased width of six inches, and with a somewhat increased

length, making it three by twelve. We conceded that under the law it was impossible to build this particular type of tenement on a twenty five foot lot, with each apartment running through from front to rear, but we demonstrated that it was perfectly practicable to build what seemed to us a much better two families on a floor tenement on such a lot, by putting one apartment in the front and another in the rear; that it was perfectly practicable to build, under the law, apartments running through from front to rear on a somewhat larger lot, and that the law interfered with no other current type except the one in question. The separate front and rear apartments, which were practical under the new law, are usual in Manhattan, and the rent obtainable from the front apartment differs but little from that obtainable from the rear apartment. Brooklyn insisted that though Brooklyn was a borough of New York and only separated from Manhattan by the East river, Brooklyn people were so accustomed to apartments running through from front to rear that they would not rent rear apartments, and indeed, that the social distinction between families who could afford to live in the front apartment, and those who would be forced to live in the rear apartment, was so great that they would not rent apartments in the same house.

This proposition may seem strained, but we of the city administration were finally satisfied that so much regard should be paid to local habits and customs, that it was wise to modify our minimum court areas in three story houses to such a point as would permit the building of this particular type of Brooklyn house. Plans were then made which demonstrated beyond peradventure that by reducing the minimum court area to 8x14, instead of 3x12, this particular type of house could be built, with bedrooms infinitely better lighted and better ventilated than those opening upon the narrow shaft. One would have supposed that this improved plan, which permitted Brooklyn builders to construct a front to rear apartment, for which they claimed so many advantages, would have been received with acclamation as a solution of the difficulty. Not at all. Some insisted that Brooklyn must have what it was accustomed to, narrow air shaft and all. Others more open-minded, while frankly admitting that the new plans made

better apartments, which should bring in an increased rental of from fifty cents to a dollar a month, insisted that tenants would not pay more rent, and that because the buildings under these new plans cost say \$800 per house more than under the old plans, they would not be commercially profitable, and therefore would not be built. Not a word was said as to the interests of tenement dwellers. There was no dearth of apartments in Brooklyn at current rents. Indeed, the supply was far beyond the demand. The whole issue turned on the commercial profitableness of building under the law, as amended by the city administration bill, to meet this Brooklyn condition. The Brooklyn builders were perfectly frank in their arguments. They started with the premise that the building of tenements in Brooklyn must be made commercially profitable; that buildings under the new plan, with a minimum court area of 8x14, would not be commercially profitable, because about \$800 was added to their cost, and therefore insisted that the law should be amended to meet their ideas of commercial profitableness. That the purpose of the law was not to promote building operations, or increase the value of real estate, but to provide healthy habitation for tenement dwellers, and that that purpose was certainly being accomplished under the new law so long as tenement dwellers could house themselves without any increase in rent, was ignored, nor if it had been urged, would it have seemed to them an argument worth considering.

I am happy to say that they did not succeed, but they demonstrated the influence which can be exerted upon the average legislator by men of their type through their trade and allied labor organizations; and had those who, at the moment, represented the unorganized public in the cities been less active, and had the force of public opinion as voiced by the press been less outspoken, the result might have been different.

The advance of tenement house reform undoubtedly means some diminution in the profit of the landlord, or some increase in rent. Improved tenements must cost more. Some one must pay that cost. If any material rise in rents would produce such opposition to the law as to repeal or modify it, then either the cost must be borne by the landlord, or

the law must be modified. Whether the landlord's rent will by the law proposed in any city be diminished below the point of legitimate profit, can not be certainly demonstrated until the experiment be tried. Some enlightened landlords, with a sense of their obligations toward their tenants, are perfectly willing to suffer this small diminution of income. Others are not, and the others, who usually constitute the majority, in alliance with the builders and material men, will always seek to prevent legislation which affects their pockets. Tenement house reform must always be militant, not only to gain ground, but to hold the ground that has once been gained.

There is something for almost every one to do. Let none suppose that our cities, however small, will remain free from the evils of the tenement house, which in larger cities has necessarily evolved in self protection tenement house regulation. The tenement has come to the United States, like the Canada thistle, to grow and to multiply. The smaller cities need not go through the bitter experience which is teaching New York and other cities their lesson. They can, by timely regulation, prevent the crystallization of unsanitary conditions into brick and mortar. I do not recommend the adoption in every city of the New York law. It was framed to meet the special conditions there existent. The remedy should be no greater than the prevailing or expected disease warrants. A few elementary regulations with regard to court areas, vacant spaces, and regular and official inspection to make certain that these simple regulations are followed in construction and that ordinary sanitary rules are complied with in maintenance, will suffice, if there always be a keen eye to look some years ahead, to meet future needs before they make themselves unpleasantly manifest in your own surroundings, and before conditions are created, as in New York, which can not be changed except at great cost to owners and to the municipality.

RACE SUICIDE IN THE UNITED STATES.

BY WALTER F. WILCOX.

[Walter F. Wilcox, expert special agent of the United States government appointed to investigate the fluctuations in the birth rate, has conducted other important inquiries for the department of commerce and labor; upon his graduation from college he began a series of studies of social problems securing his facts by original research, and his published reports of his investigations into municipal conditions, and the life of the working classes have attracted wide attention.]

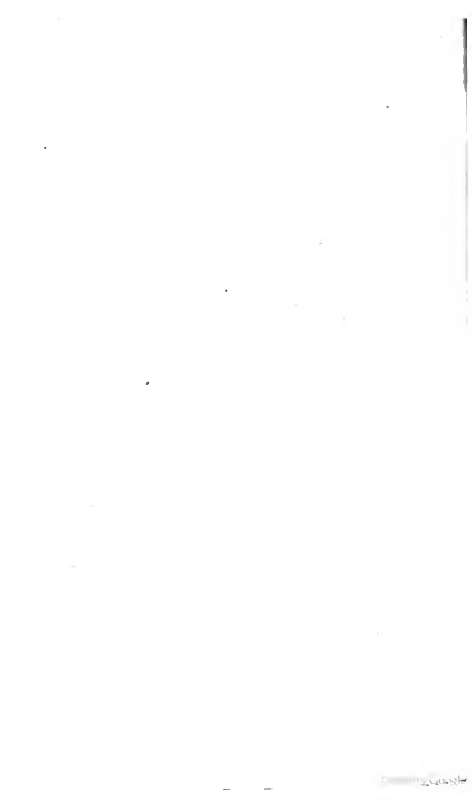
The increase of a population aside from immigration depends not merely on the number or proportion of infants annually contributed to recruit or swell the ranks of the population; it depends also on the number successfully reared. The enumeration of children under 5 years of age is admitted by every one to be far more accurate and complete than the enumeration of children under 1 year of age. The proportion of children is thus an approximately accurate and a significant clue to the amount of new blood that is being brought into the country by nature's processes of reproduction and growth. Even if the enumeration of adults is substantially complete and that of children far from complete, no valid ground has been shown for believing that the per cent of omissions among children differs widely from census to census. Each census is organized more efficiently than the last and gathers its information from a better educated, less suspicious, and more friendly population. Hence such omissions should and probably do tend to become relatively less frequent. In that case the reported number of children would increase from census to census faster than the actual number, and the tendency of such a gradually disappearing error would be to mask rather than to exaggerate the real decline in the proportion of children.

It is a debatable question whether the population with which the number of children is compared should be the total population, the adult population, the women of child bearing age, or the married women of child bearing age. Each method has its advantages. The proportion to the total population can be computed for a longer period than any other, and hence is better adapted for a preliminary survey of the general trend.

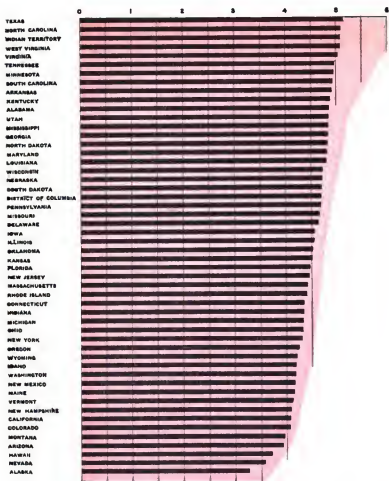
But for most purposes a comparison with the number of women of child bearing age seems the best. The number of married women of child bearing age is known only for 1890 and 1900. Partly for this reason, partly because many of the influences tending to decrease the birth rate tend also to decrease marriages, and partly because limiting the comparison to married women excludes the influence of illegitimacy, the comparison between children and married women should be used only in a subsidiary way.

The number of children under 5 years of age and also the number of women of child bearing age in the total population have been reported by the censuses only since 1850; the number of children under 10 years of age has been reported by censuses since 1830. Accordingly, an accurate statement of the proportion of children under 10 years of age to the total population can be made for the last seventy years of the nineteenth century. For 1800, 1810, and 1820 the number of free white children under 10 years of age was given, and for 1820 the number of free colored and slaves under 14 years of age. From this information an effort has been made to estimate approximately the total number of children under 10 years of age at each of these earlier censuses by aid of the assumption that as the negro population under 14 years of age in 1900 is to the negro population under 10 years of age in 1900, so is the negro population under 14 years of age in 1820 to the negro population under 10 years of age in 1820. For 1800 and 1810 the free colored and slave population under 14 years of age has first been estimated from the total free colored and slaves of all ages by assuming that the proportions of 1820 applied, and then from these estimates the free colored and slave population under 10 years of age has been estimated as in 1820. It is admitted that the results are only approximate, but it must be remembered that these estimates applied to only one sixth of the entire population under 10, five sixths of it being given by direct enumeration.

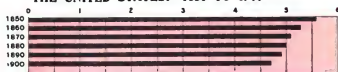
No census can furnish all the information needed to compute the birth rate or number of births in a year to each thousand persons, nor has this information been obtained for the United States, or any considerable part of it, by any other



AVERAGE NUMBER OF PERSONS TO A PRIVATE FAMILY BY STATES AND TERRITORIES



AVERAGE NUMBER OF PERSONS TO A FAMILY FOR THE UNITED STATES: 1850 TO 1900



agency. The attempts to approximate the birth rate on the basis of census figures have been far from satisfactory. As a result the birth rate in the United States, past or present, is unknown.

The ratio of the living children under 5 years of age to each 1,000 living women of child bearing age is used as the best available substitute for the birth rate during the last half of the nineteenth century.

The proportion of children under 10 years of age to the total population can be ascertained for a longer period. It has decreased almost uninterruptedly since the early part of the century, the number of such children constituting approximately one third of the total population at the beginning of the century and less than one fourth at the end. The decrease in the corresponding proportion for whites began as early as 1810 and continued uninterruptedly to the end of the century.

Since 1830, when the figures were first obtained, the proportion of negro children under 10 years of age to the total negro population has decreased. There was, however, an increase from 1860 to 1880. On the other hand, there was a rapid decrease from 1880 to 1900. The proportion of white children under 5 years of age to the total population decreased steadily, except from 1850 to 1860, the number of such children being in 1900 about three fifths of what it was in 1830. The decrease during the last decade of the century was insignificant. The corresponding proportion for negroes was at its height in 1850 and 1880 and except for 1870 was least in 1890.

The decades of great immigration and the Civil war showed the greatest ratio of decrease in the proportion of children. The decades immediately following those of great immigration showed a reduction in the rate of decrease, probably because of the high birth rate among the immigrants. The reduction in the proportion of children to total population during the century suggests but does not prove that the birth rate was lower. The increase in the proportion of children among negroes from 1860 to 1880 and the decrease from 1880 to 1900 suggests a high birth rate during the twenty years following emancipation and a rapid fall in the birth rate thereafter.

The proportion of children under 5 years of age to women of child bearing age increased from 1850, to 1860, but has decreased since then, being in 1900 about three fourths of what it was in 1860. The decline in the proportion of children since 1860 has been less marked in the south than in the north and west. The proportion in the north and west in 1850 was about five sixths and in 1900 less than three fourths of that in the south.

In 1900 the maximum proportion of children was in North Dakota and Indian Territory, where children under 5 years of age were about two thirds of the number of women. In 1890 the maximum was in North Dakota and Idaho.

In 1900 the minimum number of children was in the District of Columbia and California, being about one third of the number of women. In 1890 it was in the District of Columbia and New Hampshire.

In 1900 there was a band of states from Maine to California in which the proportion of children was below 500 to 1,000 women. This band was broken by Utah, where the influence of the Mormon church was felt. Except for Kansas the proportion for these states was below that for continental United States.

In 1890 the regions in which the number of children was less than one half the number of women were separated.

In the north Atlantic states, and in Virginia, West Virginia, North Carolina, Oklahoma, Montana, New Mexico, and Nevada the proportion of children increased between 1890 and 1900. The increase in the north Atlantic division was probably due to the high birth rate among the immigrants that entered from 1880 to 1890. In Maryland, Kentucky, Michigan, Ohio, Illinois, and Indiana the proportion of children has decreased steadily since 1850. The decrease for the country during the past decade was due in the main to the controlling influence of the states west of the Alleghenies. From 1850 to 1880 the low proportion of children in New England and the high proportion in some of the western states, especially those under Mormon influence, were striking. The proportion of white children was high in the south, showing that the pro-

portion for negro children was not the controlling factor in the proportion for the total population.

In many of the states, particularly most of those in the Atlantic divisions, the relative number of white children increased from 1890 to 1900. The largest proportion of negro children was found in 1880 and the smallest in 1900, being only about three fourths of that in 1880. The proportion for negroes was uniformly larger than that for white. As compared with whites in the south, there was for negroes an excess, reaching a maximum in 1880, at every census except 1900, when there was an excess for whites.

The proportion of children in cities was about two thirds of what it was in the country in 1900. In the north there was little difference in the proportion for city and country. In the south the proportion in cities was hardly more than half as great as that in the country. In the west the ratio of the proportion for city and country was between the two extremes.

In 1900 the proportion of children in the country was about one sixth greater for the colored population than that for the white. In cities the proportion of children among the whites was more than one half larger than that among the colored. It may be that the mortality among negro children in the city is high, as generally the birth rate is higher than for whites.

The proportion of children for each race was low in southern cities. From 1890 to 1900 the decrease in the proportion of children was much greater for the non-Caucasian than for the white race.

At the beginning of the nineteenth century children under 10 years of age constituted one third and at the end less than one fourth of the population. A decline in the proportion of children began as early as the decade 1810 to 1820, and continued almost uninterruptedly but by very different amounts until 1900. The average decrease has been about 1 per cent in a decade. The greatest decreases occurred in the decades 1840 to 1850 and 1880 to 1890. This was probably due to the enormous immigration which swelled the adult population with great rapidity. For the decade 1880 to 1890 this factor may have been reinforced by the change in the form of the

age question, although the influence of this upon the number of children under 10 is uncertain. The next largest decrease was in the decade from 1860 to 1870, when the direct and indirect effects of the Civil war reduced the proportion of children. But this decrease was accentuated by the serious omissions of that census, especially in the southern states and among the negroes, for whom the proportion of children is very high.

Statistics as a whole suggest that there has been an almost uninterrupted but irregular decrease in the birth rate from near the beginning of the nineteenth century. They do not prove this, for the decrease might be explained by the increasing vitality of the population, leading to a longer average duration of life and consequently the survival of a larger number of adults.

The method of estimating the proportion of children, by comparing them with the number of women of child bearing age, may be applied for the period 1850 to 1900. This method has two advantages over the preceding. It makes it possible to limit the children to those under 5 years of age and to exclude from the second term of the comparison all males and the females not of child bearing age. Under these conditions any decrease in the proportion of children which the figures may show could not be explained as due to the increased vitality and longevity of the adult population. The limits of child-bearing age are usually assumed as 15 and 44, but for the censuses the limits must be taken as 15 and 49.

The proportion of children increased from 1850 to 1860, and then decreased without a break but by very unequal amounts. The slight decrease from 1870 to 1880 was probably due in part to serious omissions in 1870 among the population having a large proportion of children. The slight decrease from 1890 to 1900 was probably due in part to the great prosperity of the country between 1890 and 1900, especially in the last years of the decade, in part to the many children born to the millions of immigrants of the preceding decade, and in part also to the change in the form of the age question.

In 1900 there were only three fourths as many living children to each 1,000 potential mothers as in 1860. The assumption that there has been a progressive increase in the inaccu-

racy of the censuses leading to omissions of larger and larger proportions of children is too improbable for serious refutation, and yet no other alternative can be suggested by aid of which to escape the conclusion that the birth rate has declined persistently since 1860.

It is beyond the scope of the present discussion to examine the causes of this decline in the birth rate. But one suggestion, made by the superintendent of the censuses of 1870 and 1880, Gen. F. A. Walker, and supported by statistical evidence, seems to call for mention here. General Walker pointed out that the decline in the rate of increase of the American population (and so the decline in the birth rate) began with the rapid influx of immigrants. The following quotations give the gist of his contention :

"As the foreigners began to come in larger numbers, the native population more and more withheld their own increase. Now, this correspondence might be accounted for in three different ways: (1) It might be said that it was a mere coincidence, no relation of cause and effect existing between the two phenomena. (2) It might be said that the foreigners came because the native population was relatively declining—that is, failing to keep up its pristine rate of increase. (3) It might be said that the growth of the native population was checked by the incoming of the foreign elements in such large numbers. * * *

"The true explanation of the remarkable fact we are considering I believe to be the last of the three suggested. The access of foreigners at the time and under the circumstances constituted a shock to the principle of population among the native element. That principle is always acutely sensitive, alike to sentimental and to economic conditions. And it is to be noted, in passing, that not only did the decline in the native element, as a whole, take place in singular correspondence with the excess of foreign arrivals, but it occurred chiefly in just those regions to which the newcomers most freely resorted."

General Walker concludes: "If the foregoing views are true, or contain any considerable degree of truth, foreign immigration into this country has, from the time it first assumed large proportions, amounted not to a reinforcement of our

population, but to a replacement of native by foreign stock. That if the foreigners had not come, the native element would long have filled the places the foreigners usurped, I entertain not a doubt."

Whether the evidence warrants the opinion that the decrease in the birth rate is due mainly to immigration of alien stock must be left to the student to decide. But one may mention that the recent decline of the birth rate in Australia has given rise to grave anxiety and led to the appointment in New South Wales of a governmental commission for its investigation. No torrent of alien immigrants has been flooding Australia, and yet the decline of the birth rate has probably been as rapid there as among native American stock.

It may be in place to introduce here for comparison with the opinion and the argument of General Walker the weighty words of Dr. John Shaw Billings. Toward the close of the article already cited, after he had developed conclusions in substantial agreement with those reached by a different method in the preceding analysis, he advanced from a purely statistical discussion to consider the causes of this decline in the American birth rate.

"Does this diminution in birth rates indicate a progressive diminution in fertility, in the power of either or both sexes to produce children? There is no good reason for thinking so. It is true that it has been suggested that alcohol, tobacco, and syphilis are producing a deterioration of races which is in part responsible for the change, but of this there is no evidence. So far as we have data with regard to the use of intoxicating liquors, the fertility seems to be greatest in those countries and among those classes where they are most freely used.

"Is the lessening birth rate due to changes in the mode of life of the people, such as the progressive increase of migration from the rural districts to the cities, the increase of wealth and luxury, the so-called emancipation of women, etc.?

"No doubt these things have some influence, by diminishing the proportion of marriage at comparatively early ages, and by favoring an increase in divorce and in prostitution, but it is probable that the most important factor in the change is the deliberate and voluntary avoidance or prevention of child

bearing on the part of a steadily increasing number of married people, who not only prefer to have but few children, but who know how to obtain their wish. The reasons for this are numerous, but I will mention only three.

"The first is the diffusion of information with regard to the subject of generation by means of popular and school treatises on physiology and hygiene, which diffusion began between thirty and forty years ago. Girls of 20 years of age at the present day know much more about anatomy and physiology than did their grandmothers at the same age, and the married women are much better informed as to the means by which the number of children may be limited than were those of thirty years ago. To some extent this may also be true as regards the young men, but I do not think this is an important factor.

"The second cause has been the growth of the opinion that the abstaining from having children on the part of a married couple is not only not in itself sinful, or contrary to the usual forms of religious creeds, but that it may even be under certain circumstances commendable.

"The third cause is the great increase in the use of things which were formerly considered as luxuries, but which now have become almost necessities. The greater temptations to expenditure for the purpose of securing or maintaining social position, and the correspondingly greater cost of family life in what may be called the lower middle classes, lead to the desire to have fewer children in order that they may be each better provided for, or perhaps, in some cases, from the purely selfish motive of desire to avoid care and trouble and of having more to spend on social pleasures.

"In the struggle for what is deemed a desirable mode of existence at the present day, marriage is being held less desirable, and its bonds less sacred, than they were forty years ago. Young women are gradually being imbued with the idea that marriage and motherhood are not to be their chief objects in life, or the sole methods of obtaining subsistence; that they should aim at being independent of possible or actual husbands, and should fit themselves to earn their own living in some one of the many ways in which females are beginning to find increasing sources of remunerative employment; that

housekeeping is a sort of domestic slavery, and that it is best to remain unmarried until some one offers who has the means to gratify their educated tastes. They desire to take a more active part than women have hitherto done in the management of the affairs of the community, to have wider interests, and to live broader lives than their mothers and grandmothers have done.

"It is a strong argument against this theory of the causation of the lowered birth rate for this country, that the greatest diminution in the rate has apparently occurred in the agricultural states, and especially among the colored population in the south. It appears to be probable that this greater diminution in these states is due, to some extent at least, to greater errors in the data from which the rates are calculated, both in the count of the living infants and in the returns of the born and died during the year. It is also probable that voluntary prevention of conception had been far more common in the northern and eastern states for a number of years preceding 1880 than it was in the south, but that after 1880 it has increased in the south, producing a relatively greater effect in reduction of rates, although the absolute rates are still decidedly higher than they are in the New England states.

"If this view of the case is correct, the birth rate will not only continue low in the United States as compared with former years, but it will probably become lower. On the other hand, so long as the present tendency of the people to aggregate in cities continues, as it is likely to do until our coal supplies begin to shrink perceptibly, with a corresponding increase in the cost of power for purposes of manufacture and of transportation, so long the death rates are likely to increase, and, therefore, the rate of increase in population due to excess of births over deaths will diminish. * * *

"This state of things has occurred before in the world's history in certain regions, as, for instance, in southern and western Europe during the decline of the Roman empire; and if the increase of population has not been checked, as it then was, the world would now be overcrowded.

"It does not appear to me that this lessening of the birth rate is in itself an evil, or that it will be worth while to attempt

to increase the birth rate merely for the sake of maintaining a constant increase in population, because to neither this nor the next generation will such increase be specially beneficial. But considered as one of the signs of forces which are at work to modify the existing conditions of society, and some of which appear to be of evil tendency, this diminution of the birth rate merits careful consideration by statisticians, sociologists, politicians, and all who are interested in the physical and moral well being of the inhabitants of this country."

The evidence that has developed and come to the knowledge of the writer since this article was written has strengthened his belief in the substantial accuracy of the foregoing statement. But in this field the measuring rod of statistics will find little application until the vital statistics of the United States are more perfectly developed.

AMERICAN WOMEN IN PHILANTHROPY.

BY MAY WILKINSON MOUNT.

[May Wilkinson Mount is a well known contributor to the magazines chiefly on the progress of the movement for the advancement of women, but also on philanthropic and charitable work, although more especially that in which women are engaged; her home is in New York, and she is prominent in the movements for the betterment of the conditions of the masses.]

Women take to philanthropy kindly—oftentimes vehemently, with the consequence that they frequently miscall the object of their endeavors and mistake the true for the false, thus producing as an offset to every one philanthropist nine hundred and ninety nine philanderers. This effect of woman's exertions in the cause of philanthropy may be ascribed to the centripetal forces of her nature and habits—a force acquired by centuries of cultivation, or the lack of it, and only reactionary in this age when women have been in a position to retrieve their own destinies and to put into practice concentration of mind and centralization of methods.

It is especially fitting that the new republic of the west, whose national shield is held by a woman, should be the scene of the greatest development and progress of women in the field of philanthropy. Here came the Sisters of Mercy from Newfoundland, where, at the beginning of this century, they suffered painful hardships in their work—both charitable and educational—among many tribes of Indians, of whom the Cherokees were most numerous, and whose tribal feuds furnished not the least part of their perils and called into action an ability to cope with affairs requiring the tact of a diplomat and a power of control equivalent to that of an armed force.

Philanthropy and charity in the Christian sense mean the same thing—love of fellow men; but in time the terms became differentiated until to-day philanthropist conveys to the average mind one who serves his neighbor in the way of helping him to help himself, and so reach a high standard of manhood; and charity means the giving away of one's substance to relieve a person in need. An act of philanthropy is progressive; it

sets in motion machinery which goes on and on turning out wiser, or better, or healthier men and women. An act of charity ends with the deed. It may or may not bring forth the fruit of gratitude and higher endeavor, and is only progressive in its results when its magnitude merges it into the domain which the world terms philanthropy. As an illustration: the thousands of dollars contributed by Miss Helen Gould to the hospitals might be termed a charity; her check of \$100,000 to the government was an act of philanthropy—it went to help free a people and immediately better their physical and moral conditions. This country contains millions of notably charitable women, because women by reason of their nature and occupation can best swell the roll of charity.

With very few exceptions the work of women in New York has been the inspiration of those in other cities, and its results models for others to imitate. The first sustained effort made in New York by a woman to enable other women to help themselves was the establishment, by the late Mrs. Marshall O. Roberts, of the Ladies' Christian Union home, on Washington Square, in 1858. This house lodged girls who were strangers in the city, and helped them to find employment. As the work grew, instruction of various sorts was added until, in its ripe age, the Young Woman's Christian association spread butterfly wings from the chrysalis of the old house in Washington Square, and took the industrial and educational work into a new sphere of activity. Thousands of women have reaped its benefits who had no means to secure instruction elsewhere, nor ability to obtain the employment which such an education fits them for.

Mrs. W. B. Skidmore tells of the beginning of the Ladies' Church Union. In those early days the ladies had no pattern to follow, and "we had to devise everything for ourselves," she says. The work was begun and continued in prayer before definite action was decided upon; and so unused were they to vocal prayer that Mrs. Skidmore says, "I well remember halting in a corner lest I be asked to pray." The little band of women began by visiting factory girls and women in tenement houses, and then opened their home on Amity Place. "At first it was hard to find a person to manage such a household," said Mrs.

Skidmore, "for the quarrels among the kind of domestics we could then afford brought the police officers to the door with the remark that they did not know how to settle the troubles of these Christian women!" Mrs. Roberts called and led the first great prayer meeting of women in New York, that mothers of the seventh regiment might pray for their sons who had left for service in the Civil war; while, like monuments to this lovely philanthropist and her assistants, stand three commodious homes in the city, filled with happy working women. The philanthropic woman, as a rule, is conservative. She does not attack man's prerogatives except on the neutral ground of typewriting and bookkeeping, but seeks to make feminine knowledge and its application more thorough and efficient.

A tender spirit was shown in the thought of Mrs. William G. Choate to establish in New York a place where woman's work might be sold with profit to herself, and in such manner as not to wound the sensibilities of refined gentlewomen who had unexpectedly been thrown upon their own resources for a living. Mrs. Choate opened the Woman's Exchange in 1878, with thirty poorly made articles for sale; society women rallied to her assistance and the exchange thrived under their administration. Women were taught how to bring all their work up to a standard as near perfection as possible, and through the medium of the exchange, hundreds of homes have been preserved and thousands have found a livelihood in sweet, sequestered ways. Invalids know where they may buy the purest delicacies; housekeepers patronize the delicious, home made preserves, confections and the like; while grocers and the art departments of large stores alike demand the products of the busy fingers that work behind the veil of the exchange, which is not, and was never meant to be, self supporting at the expense of its beneficiaries. Sixty similar institutions in the United States foster a spirit of independence in thousands of women, and aid the Indians of Alaska, the Acadians of Louisiana, and the peasantry of far off Russia, by sales of their handiwork in baskets, Attakapas cloth, and Russian lace, metal and wood work.

Few things show the far reaching influence of these exchanges for women better than the fact that besides all Ameri-

can women who come to them, they extend aid to far away peoples—Russians, Armenians and Mexicans alike profiting by their benevolence.

The art galleries of New York point to Mrs. Elizabeth U. Coles and Catharine Lorillard Wolfe as philanthropists through the avenues of art; and the country to Helen Gould and Grace Dodge, Gail Hamilton, Mrs. Stanford, Mrs. Hearst and Mrs. Reed, whose works and gifts have been ever towards the uplifting of young women in all the paths of knowledge.

Mrs. Newcombe gave to young women in the south a college, a church and an art gallery; and Miss Annie Howard is not the only woman in America who has built and endowed a splendid library and presented it to the city of her birth.

On the rolls of American philanthropy shine the names of an innumerable company of women; names revered in the hospitals and asylums and homes which they have built or made possible; in the multitude of libraries and schools which they have scattered broadcast all over the land; most of all glorious for the work they have done in reaching through the young to attain to the highest and best standards of manhood and womanhood—to obtain the greatest good for the greatest number.

THE FIRE FIGHTER OF TO-DAY

BY JOHN CAMPION.

John Campion, fire marshal, Chicago; born county Kilkenny, Ireland, 1849; came to Chicago in early childhood; educated in parochial and public schools; appointed on Chicago Fire department as a regular member April 1, 1870, as pipeman on steam engine, Little Giant; promoted to assistant foreman, 1871; Captain, November 11, 1873; appointed assistant marshal and chief of battalion, April 8, 1882; third assistant fire marshal, July 1, 1893; second assistant fire marshal, April 30, 1895; first assistant fire marshal, July 1, 1901; appointed fire marshal and chief of brigade, October, 17, 1904.]

The fact that most of the great firemen of the United States rose from the ranks is good proof that the men in the ranks to-day are, as a rule, efficient, intelligent, and ambitious fire fighters. The true fireman, and there are many of them in the Chicago department, is not content with just holding his job. I would not insist that any special genius is required to make a good fireman, but I do think that a number of qualities, amounting almost to special faculties, develop rapidly in the born fireman.

The kind of fireman's work which the newspapers are fond of writing about, such as daring death near falling walls, dashing drives to the fires, and other spectacular performances which the honest fireman regards as mere incidents in his daily routine of duty, are not always the best methods by which to judge of the true value and effectiveness of a fireman's work. The average fireman of experience and intelligence never thinks of taking any special credit to himself for his performances at any given fire. He is, and to be a useful member of the department must be, readily amenable to orders. He obeys his commander as readily and as unquestionably as a good soldier heeds his superior in battle.

If he is ordered to the roof of a building adjoining the fire, he goes there as a matter of course. And he stays there, obeying orders regardless of consequences. His commander takes the responsibility because he is expected to, and does know just what chances he may take in exposing his men for the ultimate purpose of defeating the fire. The company captains and lieutenants, the battalion chiefs and the assistant mar-

shals, the men in command at fires, are such for no other reason than that they are good firemen—they know their business, and all of them have been, and are still willing to be, in the same predicaments to which they send their subordinates.

In the career of a fireman this thing of knowing your business is as essential to success as it is in any other walk of life. But the knowledge involved is not confined between the engine house and the sudden fire. For instance, the captain and lieutenant of a company will, if they are devoted to their duties, make it their business to become acquainted with the district in which they are to operate. To know a district means more than to be sure of the location of buildings, the conditions of streets and alleys, and the situation of the fire hydrants. It means also a thorough and continuous familiarity with the construction of every house, the disposition and character of the contents of every establishment, the arrangement of fire escapes, and the points of vantage from which a fire may be attacked.

It is not possible to exaggerate the value of this information; for the commanding officer of a company of firemen has something more than the saving of property on his hands. The lives of his subordinates may, some day or night, depend upon his absolute knowledge of the style of construction and the character of the contents of some building. To master all of these details requires time and careful investigation, and the officer or man who expects to be of the greatest and most lasting service to the department will find, if he is industrious, that there is plenty for him to do between fires.

It will not do to depend always upon the captains, lieutenants, and other higher officers for this superior knowledge; for occasions may arise in which the regular commanders are absent or off duty, and in such an event the authority over a company may descend upon one of the firemen, subject of course to the instructions of the battalion chiefs, and, finally, the marshal or assistant marshal in charge. The public of the big cities are apt to fancy that the fireman's work is done when the "fire out" signal is sounded, but that is not true. The fact is that every fire engine house in the city is an informal training

school for the men whose business it is to save from flames the property and often the lives of taxpayers and residents.

It is a fact that few men who adopt the career of a fireman do so merely for the pay. Nine out of ten of them are born firemen, and they bring to their work something more than the common ability to work hard. They have a pride in their work which is not apparent in many trades. Their courage, their physical strength, their everlasting readiness, are regarded by themselves as matters of course. But, as a rule, they go beyond this. The fireman in the ranks, if he has the proper spirit, if he means to excel, is likely to know all about his district. If he is serious about his work, he will know where the blind alleys are and, either by personal investigation or by dint of conversation with his comrades, he is almost sure to know a great deal about the layout of every fire that may occur in his neighborhood.

Of course with the marshal, the assistant marshals, the battalion chiefs, and the captains and lieutenants of companies this is an absolute duty—this work of personally investigating buildings and their contents and the streets, alleys, fire hydrants, and surroundings of the sections under their control.

Perhaps no branch of public service requires more of the time and attention of its men than the fire department. They must not only be ready for the call of duty during the day, but they must sleep at their stations at night. For more than thirty years I have not lived at home. There are hundreds of firemen in Chicago who live similar lives and who have accustomed themselves to forget their private wishes and comforts in the desire to fulfil their duties.

Besides the work of fighting fires there is an unending routine of less interesting work about the company houses. They must be kept clean and orderly; the horses must be cared for and trained; the apparatus must be maintained spotless and ready. Fire drills, physical training, the always changing conditions of the buildings, streets, and alleys of the city give the energetic, industrious firemen plenty of occupation, and, as a rule, these less heroic details of their duties are not neglected.

The system of safeguarding districts from which the

different companies have been called out to fires is perfectly understood by all of the commanding officers of the department and by all of the firemen. The public may not know it, but this feature of work in the Chicago department runs with such absolute accuracy that, no matter where the fire is nor how large it is, the districts which have sent their regular companies to fight the flames are not left unguarded. The central office in the city hall is, so to speak, the nerve center of the whole department. The printed schedule with which every fireman is familiar, shows at a glance which of the marshals and battalion chiefs must go to each fire as indicated by the box number from which the alarm was sounded.

For instance, if the schedule says that I must go to the fire and that the first assistant and the second assistant are also gone, the next man in rank knows that he is to come to the central office and from there dispose of the companies which are not at the fire in such a manner that no district is left unprotected from later fires. Complicated as such a system may seem at first glance, yet it is thoroughly understood and always works without friction. Every engine house keeps its own record, not only of its own runs but of all the companies that participate in any fire, and also a table showing to what houses the company went to do what you might call guard duty during the progress of fires.

The practical side of a fireman's life is sure to be a busy one for the good fireman. In this respect it is like any other business. Lazy men, loafers, careless members never become good firemen, and they seldom last long. The industrious, thoughtful, observant man, if he is fitted physically, is the one who lasts and who rises at last to the position of authority. The sluggard and the coward have no business in the department. The Chicago department is exceptionally free from either. It is a hard life at the best, and, like all hard lives, brings out the best that is in a man. Everybody knows that it requires courage and strength to be even an average fireman. But quick intelligence, continual study of the details of the work and its chances, absolute devotion to the service at all hours and under all conditions—these are the least showy features of a fireman's life, and they are just as necessary as bravery and a powerful body.

BUILDING AND LOAN ASSOCIATIONS MAKE BOTH MEN AND CITIES.

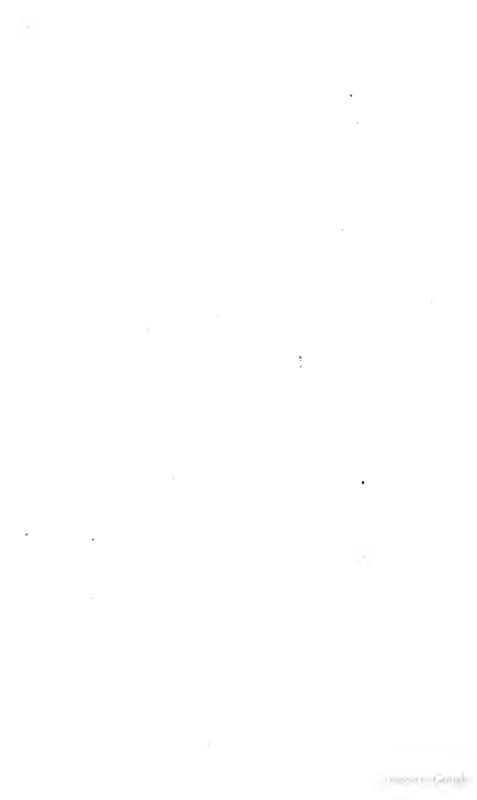
HERBERT FRANCIS DeBOWER.

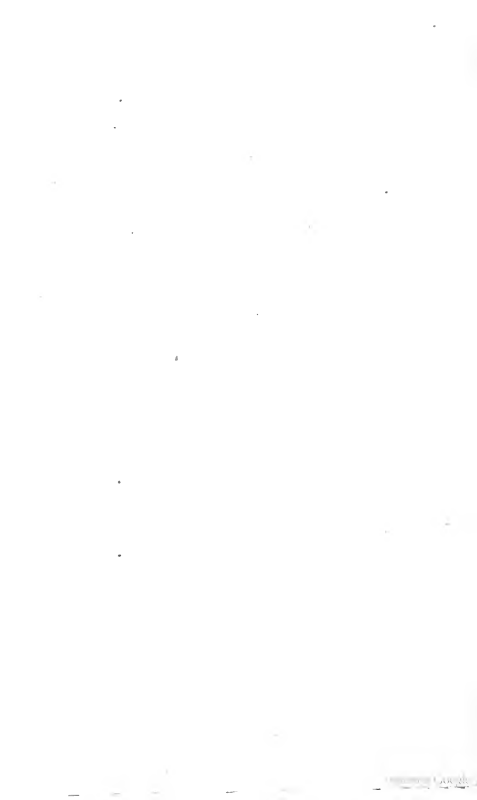
[Herbert Francis DeBower, lawyer and publisher; born in Wisconsin in 1873. Graduated University of Wisconsin, 1896. After a year at Madison, Wisconsin, he forsook the practice of law to enter the publishing world. He went to New York city and reviewed several articles that later appeared in the American and English Encyclopedia of Law; during this time he made a close study of the law of building and loan associations and later gained practical experience in the sale of building and loan stock; he has been an extensive traveler, having visited every state and territory in the United States, Mexico, Canada, and the Insular possessions; is president DeBower-Elliott Company, Chicago.]

From its first night's business meeting a building and loan association becomes a modified savings bank, in which at least one member ought to be able to borrow \$1,000 at 6 per cent per annum, taking the money away with him to put under his pillow if he so wills, regardless of the business day and banking hours.

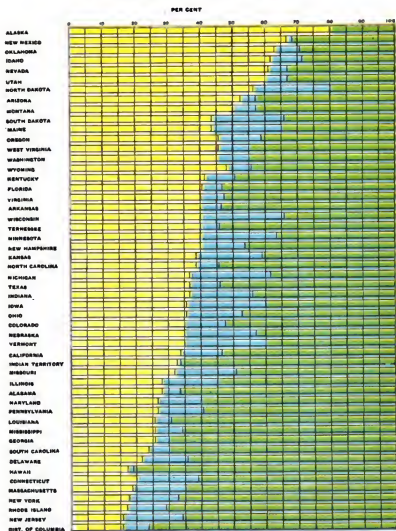
This statement, however, would make it necessary that 100 members be in attendance, holding 1,000 shares of the stock at \$200 each, on which \$1 a share is the monthly due of the member. In one way or another the man who would get the \$1,000 loan would have paid for the privilege in cash, or would have proved his luck by lot. And the ninety nine other members of the organization would disperse lighter in purse, but satisfied.

Considered as a form of banking, however, the whole transaction is the apotheosis of simplicity. No place of business has been necessary. There is no burglar proof safe in the furniture and fixture accounts. There are no fireproof vaults for the storage of the concern's books. No cash is left to tempt a dishonest cashier or teller. No possible run on the institution could wreck it. There are no idle, uninvested funds to vex the management. One man has \$10 of his own money and \$990 belonging to the other fellows, and, as long as he pays his \$1 a share in dues and keeps his interest up, the whole 100 membership is in a fair way to earn its 10 to 14 per





PROPORTION OF HOMES OWNED FREE, OWNED ENCUMBERED, AND HIRED



cent profit, judged by the history of well conducted building and loan companies.

In the briefest and most pointed English the building and loan association is the gathering of the 100 men most of whom would like to borrow \$1,000. There is a total of \$1,000 in the pockets of the whole crowd. They agree and dump the money into a hat. Then the man who will bid the highest premium for the loan, or who is lucky enough to draw the deciding number by lot, takes the pile, paying interest at a fixed rate to all the other ninety nine contributors. Next month the 100 men meet again, dump another \$1,000 in the hat, and the ninety nine contest for the privilege of the loan.

But not all building and loan members desire to borrow money. It is desirable that not all of them should, and for this reason the man who doesn't want a loan finds some concessions made him to enter.

In the first place this small investor has been up against the savings bank proposition, perhaps in an unexpected light. Perhaps he once deposited \$200 in a savings bank on Jan. 5 of some new year. He left it there till July 1 and got his interest, amounting to about \$3. He left it in the bank perhaps till Dec. 27 of that year, when he went to draw it out. Then he discovered that instead of his having within a few cents of \$6 for the use of his money the bank tells him that nothing is due him for the reason that he is taking the money out just five days too soon for the interest credit.

This man becomes the best kind of investing member in the building and loan association. He is a careful, saving type. He is punctual and businesslike in his small dealings. He may shy at first when he discovers that a membership fee is exacted of him before he can deposit his \$1 a month on his block of shares, but he is comforted when it is explained that every other member of the institution must do the same thing.

It is just in his line when he is told further that every man must come up to the scratch with his dues before a certain date early in the month or pay a fine into the treasury. It is no shock to his sense of business to discover that a member can draw out only 95 per cent of his total interests in the association previous to the maturity of his stock. He is satisfied,

also, if, in lieu of this penalty. the man drawing out pays \$1 or \$2 a share for the privilege. All these provisions are directed at the careless or defaulting or failing type of man, and the sum of all these exactions will redound to his final profits.

Easier than a savings bank for the man who wants to borrow money—safer and more profitable far to the man who wishes to deposit money—no fear of embezzlements, panicky runs, doped books, or wildcat speculations—all these possibilities are shown to the man who in his own local neighborhood or small city goes in with men whom he knows in a mutual agreement for community welfare and individual profit; and, above all, the fact that no one other than the secretary receives a salary compensation, from president down.

Frankford, Pa., a suburb of Philadelphia, originated the scheme in the Oxford Provident Building and Loan association away back in 1831. Between 1840 and 1850 the building and loan association rose to the dignity of a permanent institution, and ever since the state of Pennsylvania has held the palm for numbers of associations and memberships.

Ten years ago the scheme was in the height of its exploiting, favorable and unfavorable. Some trickeries and crookedness in certain ways and means, especially in the national companies, made bad odor for the association scheme. But the building and loan association, as a mutual organization for building loans and safe investments, is by no means dead or dying. Among these associations, local and national, which existed in 1893 there was a membership of 1,745,725 in 6,000 associations; there were \$450,000,000 in shares outstanding; only 456,000 members of associations were borrowers; and in the life of the institutions then in existence only 8,400 mortgages had been foreclosed, valued at \$12,217,000, and showing loans of only \$450,000.

Considering that 90 per cent of the membership in these institutions were without banking experience or investment experience of any kind, could the showing be better? And especially could it be better when in the mere plans for the distribution of matured shares and earnings there were twenty six methods in use and nearly 100 plans for the reducing of dues and the adjustment of loan apportionments?

The first rock which the building and loan association struck hard in its evolution was that condition when no member of the association desired to borrow any more money. His shares had matured, releasing his loans and obligations. There was no provision for loaning funds to any one but a member. The dues collected, and there were no takers coming forward with premiums or drawing schemes by lot. Out of the anomalous condition the forced loan was suggested. By the same lot drawing, somebody who didn't want the money was stuck with it for a loan period, whether he would or not. The result of this unexpected expedient led to another solution of the general difficulty.

Much of this trouble had come about through the ruling that the man coming into an association after its organization was required to pay all back dues upon the original first issue of shares. If only a month had intervened the difference was slight. If it were a year or two years, the back dues were great enough to be almost wholly prohibitive.

The first plan evolved for the perpetuity of the association provided for the issuance of a new share series whenever occasion required. On this issue the new member paid just as the member in the first series paid, after his entry taking his proportionate earnings of the combination accordingly as his money had been used. Members were encouraged to withdraw shares near to maturity. The holding of free shares—shares not loaned upon—was less encouraged. As a result, the average life of any one series was fixed at four years by these conditions. This serial plan virtually is the plan of the building and loan association of to-day, unless in individual communities where it is the aim and wish of members that the terminating association is all that is needed.

Not a little ingenuity has been expended in the many plans for choosing the preferred claimant for a building loan. As one of almost 100 methods the following is typical:

A man has taken five shares in the association at \$200 each. He needs the \$1,000 that is on hand, and, especially as any premium he pays for the privilege goes into the general profit fund of the association, he feels disposed to bid sharply with any possible competitor for the privilege. And he does.

The bids run up until he gets the loan for a premium of 5 per cent. This \$50 is taken from the full amount of the loan, leaving the borrower with \$950 and yet obligated to pay the \$1,000 principal and interest on that sum at 6 per cent. In the meantime, at \$1 a share each month, his dues are \$60 a year, and his interest and his dues are continued until he can withdraw or until his shares mature and are canceled. In the meantime his security for the loan has been a first mortgage upon the property into which the \$950 first went.

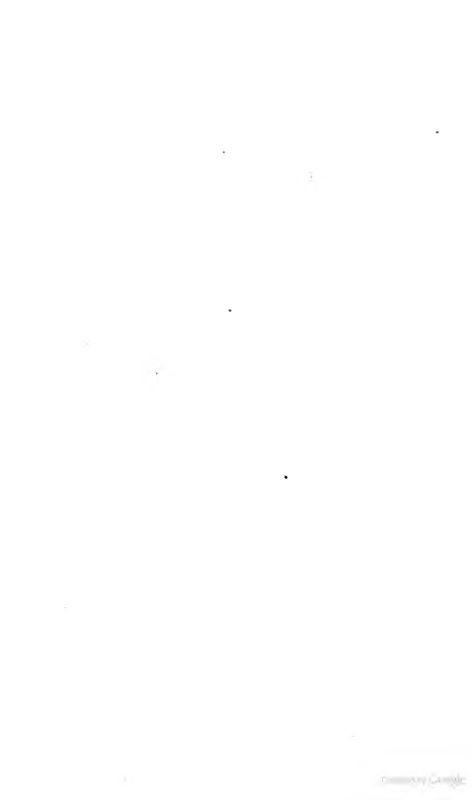
In some companies the plan of determining the borrower is decided by the bidding system, but in another way. The man who will come forward with the largest number of dues to be paid in advance, accompanying these with the greatest sum of interest in advance, gets the loan. His dues are settled in advance for that period and no more interest is paid until the advance interest has been absorbed.

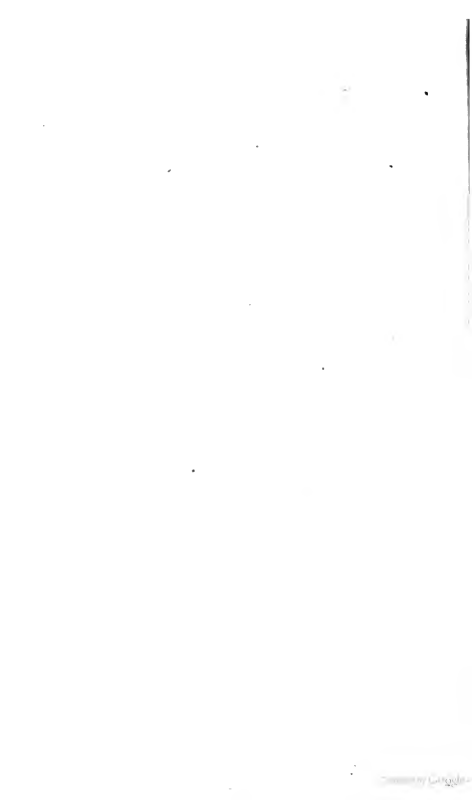
But if a hundred plans for deciding upon the borrower have been necessary, the twenty six or more plans for the distribution of profits to the memberships have been even more interesting and complicated to the casual demonstrator in arithmetical calculations.

It was with the adoption of the new series idea that these figures became troublesome. Sometimes an association has found it necessary to issue a new share series every quarter. How to adjust the profits to each member has been difficult of solution. Out of the twenty six processes that have evolved, one is indicative of the general scheme.

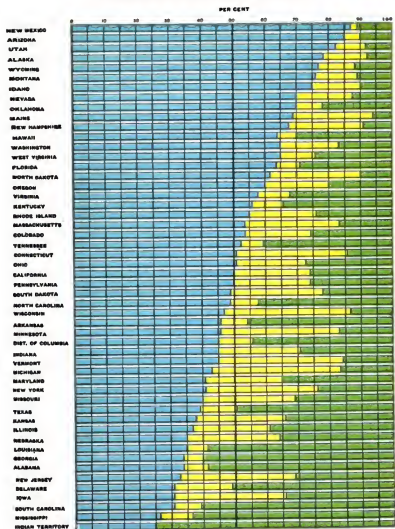
For illustration, it will be considered that an association has completed its fourth year, having issued four series of shares on the first of each January, and is preparing for a distribution of \$3,000 profits for the fourth year. In the first year 500 shares were issued, 600 shares in the second year, 400 shares in the third, and 500 shares in the fourth year, the payments being \$1 a month for each share.

At the end of this fourth year under consideration the man who made a first payment on his shares has paid in \$48, and there were 500 of these men, according to the illustration. Then through the whole four years the total dues on the four series paid in would stand:





PROPORTION OF FARM HOMES OWNED FREE, OWNED ENCUMBERED, AND HIRED



\$48 by 500.....	\$24,000
36 by 600.....	21,600
24 by 400.....	9,600
12 by 500.....	6,000

Total dues.....\$61,200

According to the books of the association the shares in the first series before the fourth year apportionment are worth \$38.87; in the second series they are worth \$25.27; in the third they are worth \$12.32, with the shares in the fourth year undetermined. Determining these values of each share in the four series, the process is as follows:

Dividing the \$3,000 net profits of the fourth year by the \$61,200 of aggregate dues for the whole period, the rate per cent of profit on these dues is 4.9019 for the year. With this rate established the rest is simple:

	Profit.	Last value.	Value each share
\$48 by .049019.....	\$2.35 plus	\$38.87 plus \$12	\$53.22
36 by .049019.....	1.76 plus	25.27 plus 12	39.03
24 by .049019.....	1.18 plus	12.32 plus 12	25.50
12 by .049019.....	.59 plus	 plus 12	12.59

When this calculation has been made with this sample piece of work, it is shown on the books that \$2 remains still undivided profit, presumably for the reason that it would take more time to divide it than the \$2 could be worth to any one.

There are tens of thousands of home owners in the country who have owed their homes to the building and loan associations. These in many instances have not been naturally saving and careful. The example of some friend or friends in suburb or city neighborhood has stirred them to the possibilities of a home based upon a careful, systematic business principle, and in the exacting measures of an association of which the careless type is a full member the naturally delinquent nature has been roused. In a dozen ways the headless local building and loan association has been building not only cities but men.

FRATERNAL INSURANCE IN THE UNITED STATES.

BY B. H. MEYER.

[Balthasar Henry Meyer, professor University of Wisconsin, and member of railroad commission, born Mequon, Ozaukee Co., Wis., May 28, 1866; educated at the Oshkosh normal school, University of Wisconsin, and University of Berlin; has conducted investigations for the United States Census Bureau and Interstate Commerce commission; now in charge of division of transportation, Carnegie institute. Author, *Railway Legislation in the United States*, etc.]

There are in the neighborhood of six hundred fraternal beneficiary societies in the United States, with an aggregate membership of about five millions. Approximately one half of these societies maintain systems of benefits which are chiefly remedial, and which can not properly be characterized as systems of insurance. During the year 1899, one of the largest orders providing this kind of benefits expended \$3,119,-125.47 in relief work. Yet the organization in question is not a fraternal insurance society. It simply does relief work on a grand scale.

Very different in nature are the benefit systems and protective features of the other half of the fraternal system. The societies of this class may engage in relief work similar to that of the other class, but they attempt more and something fundamentally different. They bind themselves by contract to pay a certain sum of money as relief, benefit, or protection, on the occurrence of certain events; such as sickness, disability, death, etc. The important consideration in these cases is the fact that a specific sum of money is to be paid to some beneficiary as soon as certain designated contingencies have arisen. This sum of money is named in the certificate, together with the name of the beneficiary, the amount of his periodical contributions, etc. In view of the fact that so many persons connected with fraternal societies object to the use of old line terms, it may be well to explain that the writer selected the title of this paper, *Fraternal Insurance*, after some deliberation. It is his intention to confine this discussion to what is expressed in the title; namely, to insurance carried on by fraternal societies. Here one is at once met by the objection that

fraternal societies, as a class, do not engage in insurance business, and that they are far removed from the material motives of speculative insurance companies. The answer to these objections is apparent: Any organization which guarantees the payment of a definite sum of money, under certain circumstances, dependent upon the contingencies of human life, in return for certain contributions, does an insurance business. We may call the document relating to this arrangement a certificate; the payments made periodically contributions, fees, dues, etc.; the final payment, on the occurrence of the specified contingencies, benefits; the whole is nevertheless an insurance contract, pure and simple, and the society issuing such a certificate is doing an insurance business, subject to all the laws and principles applicable to insurance in general. This last proposition, long accepted by a few fraternal societies and ignored or bitterly contested by many others, deserves especial emphasis.

The dual nature of fraternal societies has probably been partly responsible for the perpetuation of the fallacy that insurance is one thing and that fraternal insurance is another and a different thing. The fraternal societies falling within the scope of this essay—one half of the total number—are both fraternities and insurance companies, the fraternal element sometimes overshadowing the beneficiary features, or vice versa. It is probable that the cohesive power of numerous societies doing an insurance business would fail, were not the fraternal features so potent. In the preservation and extension of the field which the fraternal element has gained, and in the thorough reformation of defective benefit systems must lie the future development of the entire fraternal system.

Evidence to show the existence of defective schemes of fraternal insurance is not far to seek. In a circular issued by one fraternal society the position is maintained that mortality experience cannot be reduced to law! Another attempts to prove that the addition of new members will always keep the average age of the entire membership down to a certain level, and that with additional effort the same can permanently be reduced. How to do this—to follow the argument to its logical conclusion—without ultimately including

the population of the world, and then making the populated globe larger, the author does not explain. Still another asserts that the death of some members soon after joining the order does not weaken the association. The first death in the order is a case in point. Our deceased friend held a \$3,000 contract and had paid only one assessment of \$3. The amount placed in the reserve fund by reason of his death was, therefore, \$897. This was loaned at 5 per cent, and brings in \$44.85 per year. If he had lived, the most he could have paid in twelve assessments would have been \$36 a year. Yet the sum that his death added to the reserve fund is earning more than that, and in time will make good the amount paid to his beneficiaries. In spite of such gross fallacies this society is gaining members rapidly in one of our greatest commonwealths.

It would be a thankless task to rehearse the long tale of failures among fraternal societies. Besides, old line companies and other departments of the mercantile world have had their epidemics of financial ruin. Yet, excepting paper money crazes, history probably affords no parallel to the blind and persistent adhesion which so many people in all parts of the United States have shown to hopelessly unsound schemes of fraternal insurance. An examination of many such schemes leaves upon one the impression that their promoters thought of certain sums of money to be paid as benefits under certain conditions on the one hand; and of certain contributions which it might be convenient to make, on the other; without apparently reflecting upon a possible causal connection between the two. The history of such organizations is quite generally the same. A rapid increase in membership, possibly also a simultaneous reduction in the average age; a gradual increase in the death rate, accompanied by increasing difficulty in securing new members; an increase in assessments or rates and loss of members, or an attempt to slide along without raising assessments; and finally, financial failure. That some fraternal societies are thoroughly sound, financially, and that others have successfully advanced rates and maintained the integrity of their organizations does not affect this general statement. On the other hand, the very fact that an increase in contribu-

tions was found necessary in various societies is *prima facie* evidence that the original scheme was financially unsound.

A late and important failure illustrates this. At the time of organization no attention was paid to mortality tables. As the members began to grow old and the dues increased, it was found that the assessments had been fixed too low to meet the obligations. At various times since the institution of the order it has been found necessary to increase the assessments, but old members agreed to pay the increase because they had reached an age when insurance in a regular life company could no longer be obtained. Another inducement for continuing in spite of the larger assessments was the fact that they had so much money invested in the organization that they felt they could not afford to lose it.

The proceedings of the National Fraternal congress for 1899 found that the rates paid for the same kind of insurance, at the same age, in different societies, were: at the age of 30 from 25 cents to \$1.40; at the age of 50 from 65 cents to \$3.80.

Still more elaborate comparisons are made in the subjoined table, exhibiting, except in columns 1, 11 and 12, level annual rates for \$1,000 of whole life insurance. Column 1 gives ages. Column 2 gives the net annual level premiums based upon the American experience table, with 4 per cent interest. Since net premiums provide for the so-called reserve and mortality elements only, but not for the loading or expense element, the premium actually collected, gross or office premium, must be considerably in excess of what is indicated in this column. The assumed rate of interest is perhaps too high for a time when a number of leading companies are going over to a 3 per cent basis. This would necessitate another addition to the net premium, for the lower the assumed rate of interest, the higher must the premium be. Column 3 contains the net annual level rate per \$1,000 of whole life insurance, adopted and recommended by the National Fraternal congress. Columns 4, 5, 6, 7, 8, and 9 show the rates collected by as many different fraternal societies for \$1,000 of whole life insurance.

For columns 5, 8 and 9 the annual rate was secured by multiplying the monthly rate by twelve. The product is

Comparative Exhibit of Fraternal and American Experience Tables.

Age	Level Annual of Insurance.					Premiums for \$1,000.					Probability of Dying.	
	1	2.†	3.‡	4.	5.*	6.	7.	8.*	9*	10.†	11.	12.
31	12 96	10 03	7 08		4 80	4 80	9 60	8.40	7.56	14.72	.007965	.005385
32	15 24	10 92	7 32		"	"	10 40	"	7.86	15.04	.007406	.005571
33	18 54	11 24	7 56		"	"	"	"	7.90	15.28	.007568	.005707
34	19 87	11 57	7 92		"	"	"	"	7.92	15.74	.008011	.005750
35	14 31	11 92	8 16		"	"	"	"	8.04	16.11	.008055	.005901
36	14 57	12 26	8 40		"	"	"	"	8.16	16.61	.008130	.006059
37	14 96	12 67	8 76		"	"	"	"	8.40	16.92	.008197	.006218
38	15 35	13 08	9 00		"	"	"	"	8.64	17.25	.008264	.006389
39	15 77	13 51	9 36		5 40	5 40	11 20	"	8.88	17.81	.008345	.006549
40	16 21	13 96	9 72		"	"	"	10 08	9.09	18.28	.008427	.006722
41	16 68	14 43	10 08		"	"	"	"	9.26	18.79	.008510	.006907
42	17 18	14 94	10 46		"	"	12 00	"	9.50	19.33	.008607	.007098
43	17 70	15 47	11 04		"	"	"	"	9.74	19.87	.008718	.007298
44	18 25	16 03	11 40		"	6 00	"	"	9.98	20.45	.008831	.007504
45	18 84	16 62	11 76		"	"	12 80	"	10.22	21.08	.008945	.007716
46	19 46	17 34	12 24		"	"	"	"	10.46	21.74	.009069	.007937
47	20 12	17 90	12 72		"	"	"	12 00	10.70	22.43	.009204	.008160
48	20 82	18 60	13 08	5 00	"	"	"	"	11.05	23.16	.009349	.008398
49	21 57	19 34	13 80	"	6 00	13 60	"	"	11.42	23.93	.009506	.008641
50	22 35	20 11	14 40	"	"	"	"	"	12.00	24.75	.009794	.008891
51	23 19	20 93	15 12	"	"	14 40	"	"	13.20	25.69	.010008	.009148
52	24 08	21 80	15 84	5 00	7 20	"	"	"	14.40	26.54	.010252	.009406
53	25 03	22 72	16 56	"	"	15 20	"	"	15.00	27.69	.010517	.009678
54	26 04	23 69	17 28	"	"	"	"	14 40	15.80	28.56	.010809	.009948
55	27 12	24 73	18 12	"	7 80	"	"	"	17.00	29.67	.011168	.010227
56	28 27	25 81	18 96	"	8 40	16 80	"	"	18.20	30.84	.011592	.010507
57	29 50	26 91	19 80	7 20	9 00	"	"	"	19.40	32.69	.012000	.010794
58	30 81	28 39	20 76	7 80	9 60	17 60	"	"	20.60	33.43	.012509	.011089
59	32 21	29 51	21 72	8 40	10 80	"	"	"	21.80	34.85	.013106	.011396
60	33 70	30 98	22 80	9 00	11 40	19 20	"	"	23.00	36.36	.013781	.011740
61	35 29	32 39	24 00	9 60	"	"	"	"	"	37.97	.014541	.012132
62	36 98	33 97	25 20	10 80	12 00	"	"	"	"	39.66	.015390	.012579
63	38 79	35 65	26 64	10 80	12 60	"	"	"	"	41.61	.016333	.013071
64	40 73	37 45	28 08	11 40	13 80	"	"	"	"	43.46	.017286	.013607
65	42 79	39 36	"	12 00	15 00	"	"	"	"	45.54	.018571	.014204
66	45 00	41 41	"	12 60	"	"	"	"	"	47.76	.019886	.014867
67	47 35	43 60	"	13 20	"	"	"	"	"	50.13	.021335	.015600
68	49 87	45 94	"	13 80	"	"	"	"	"	52.66	.022936	.016404
69	52 57	48 46	"	14 40	"	"	"	"	"	55.37	.024730	.017284
70	55 45	51 13	"	15 00	"	"	"	"	"	58.27	.026843	.018250
81	58 54	"	"	15 60	"	"	"	"	"	"	.028880	.019434
82	61 84	"	"	16 20	"	"	"	"	"	"	.031262	.020720
83	65 39	"	"	16 80	"	"	"	"	"	"	.033943	.022100
84	69 18	"	"	17 40	"	"	"	"	"	"	.036972	.023571
85	73 25	"	"	18 00	"	"	"	"	"	"	.040129	.025104

* Secured by multiplying the monthly rate by twelve.

† Gross premiums.

‡ Net premiums.

consequently too large, for monthly payments must necessarily be greater than one twelfth of the annual premium, to compensate for loss of interest and the lesser losses due to intervening mortality. Annual premiums are always supposed to be paid at the beginning of the year, thus giving the society the benefit of the interest earnings during the year. In case of monthly payments these earnings are appreciably smaller because of the reduced periods of time during which loans can be made. Column 10 exhibits the gross or office level annual premiums charged by a society which aims to provide pure insurance at the lowest possible cost under a

mutual system. This table has the sanction of able actuaries. Columns 11 and 12 show the probability of dying according to the American experience and National Fraternal congress tables respectively. In these columns one finds the reason for the differences existing between columns 2 and 3, the probability of dying being correspondingly lower in column 12.

It will be noticed that the premiums in column 3 are approximately one sixth lower than those in column 2, up to age thirty five; and that for ages above thirty five they are only about one tenth lower. Although the rates of column 4 are generally one third below those of the fraternal congress, they show system and careful calculation, as a comparison with columns 2 and 11 and 12 will readily reveal. Columns 5, 6, 7, 8 and 9 are fair examples of that type of fraternal societies which attempt to make the world believe that accepted mortality tables are thoroughly bad, and that they can furnish insurance or protection at rates from one half or one third to one fourth of old line rates. They promise benefits out of all proportion to the contributions made, and sooner or later go into inevitable ruin. Column 10 shows the table of rates prepared by competent actuaries for a society which aims to furnish insurance at the lowest possible cost consistent with safety and efficiency. This society, furthermore, aims to eliminate the investment features from its insurance, and to restrict its business to the furnishing of mere life protection. If the relief work of many fraternal societies may be characterized as remedial, the insurance of this society may be described as preventive, just as tontine and semi-tontine policies may be termed speculative. Modern life insurance as a whole is primarily preventive; whereas in its beginnings, insurance was chiefly remedial. The transition from the remedial to the preventive form was made possible only by the scientific formulation of accumulated experience, and the transaction of insurance business on the basis of this experience. Accumulated experience eliminated gradually the chance or speculative element which was so prominent in some earlier forms of insurance, such as the maritime or sea loan, in connection with which some life underwriting was also done. Although an element of speculation still survives and the in-

vestment features of many policies are predominant, modern life insurance is the greatest engine of prevention which the world has known. Failure to recognize the scientific truth that the efficiency of this preventive work depends absolutely upon rigid adherence to health experience has not only brought disaster to thousands of fraternal societies, but has tended to throw the entire fraternal system into disrepute, as well as to discredit insurance in every other form.

The fact is, therefore, worthy of emphasis that the National Fraternal congress has for some time recommended a table of rates (column 3) which is the result of years of work of a standing committee of this body. Like all other scientific tables of rates, this is based upon a mortality table. Only a part of the fraternal congress mortality table is given in column 12. The committee took into consideration the published experience of old line companies in the United States and several foreign countries, and the experience of several of the largest and oldest fraternal societies in this country. The committee was unanimously of the opinion that the actuaries' and American experience tables are too high both from the experience of the old line companies and from that of fraternal societies. Having reached this conclusion, the committee combined the various actual mortality experiences into a new mortality table. The latter was made the basis of the premium rates in column 3; and, in addition, of step-rate and modified step-rate plans. A fraternal society might accept the mortality table without adopting the schedule of rates. For instance, column 3 assumes 4 per cent interest. This is probably too high for the present; hence, a society desiring to assume an interest basis of 3 or $3\frac{1}{2}$ per cent could construct its own tables on the basis of the mortality table, giving it, of course, a higher rate of net annual level premiums than those of column 3. The chief significance of the work of this committee on rates lies in the official recognition which has repeatedly been given by fraternalists to this kind of work, and the inference that any fraternal society whose experience is more unfavorable than that assumed in the fraternal congress tables is faulty either in plan or management, or both. It is doubtful, however, whether fraternalists as a body sufficiently

realize the advantage of assuming a more unfavorable mortality rate than their own experience realizes. No one will be inclined to question the desirability if not also the necessity of erring on this side of the line.

Here we are confronted by the question of reserve and surplus. An ideal system of pure life insurance would be one in which the actual experience is identical with that assumed in the mortality table upon which the organization in question bases its tables of premium rates; in which the interest earnings are exactly equal to the assumed rate; in which the expenses of management absorb only the sums set apart as loading; and in which there exist no lapses, surrender values, etc. It is needless to add that such an ideal can never be fully realized in practice. To base gross premiums or assessments on the lowest possible death rate, a high rate of interest, and the least allowance for expenses of management, and then encounter experience more unfavorable than that which was assumed in estimating premiums, in any one or more of these lines, if continued for a longer or shorter period of time, can result in nothing but failure. To assume too high a rate of mortality, too low a rate of interest, and too heavy an expense in administration, makes premiums unnecessarily high, and results in the accumulation of a large surplus. This is what fraternal societies object to; yet, if an error is made, it should certainly be made in this rather than in the opposite direction; and with wise management, under a participating system, a distribution of these accumulated funds will ultimately be of benefit to the policy holder. With a relatively small number of exceptions, fraternal insurance societies have erred not only in neglecting scientific mortality tables, but also in assuming experiences much too favorable under present social conditions. On the other hand, their aim to provide pure insurance at the lowest possible cost is a laudable one, and, when accepted business methods are pursued, capable of diffusing great benefits among members. The accumulation of an enormous surplus is considered inconsistent with fraternal principles; yet it should be added that the accumulation of no surplus whatever is probably always (except in natural plans) inconsistent with safe business principles, because it

signifies either that interest, cost of insurance, and loading, as assumed, are exactly realized in practice, in which case the ideal would have been attained; or, which would be disastrous, that experience is more unfavorable than the assumptions on which the business is based. Prudence would dictate that at least a small margin should be allowed for adverse conditions. So much for the question of a surplus.

Somewhat different in nature but of even greater importance is the question of a reserve. The National Fraternal congress has almost from the very first included this among the subjects for discussion, and the organization of an American fraternal congress at Omaha, in October, 1898, making the chief qualification for membership the adoption of a reserve system, is significant in that it shows a well marked division of opinion among fraternalists on the question of reserves. The National Fraternal congress has not yet taken steps making it obligatory on the part of its members to adopt a reserve fund; yet, speakers before this body have repeatedly urged the necessity of adopting reserve systems. A number of societies—consistent with the traditional fraternal dislike for old line terms—have established safety or emergency funds, which are technically reserve funds. Several prominent fraternalists expressed their approval of both a reserve and a natural plan before the National Fraternal congress of 1900, and similar utterances were made before the same congress during earlier years, notably in 1893, 1894 and 1898. An examination of all the proceedings of this congress gives the reader the impression that there is an unmistakable tendency among fraternal insurance societies toward the reserve or natural premium plans, especially the former.

Disregarding several minor considerations, under a reserve plan the premiums are level, i. e., do not vary in amount during the premium paying period of the policy. Since the cost of insurance—i. e., moneys required to meet current mortality losses—increases with increasing age, it follows that under a level premium system the earlier premiums are greater and the later premium payments less than the cost of insurance for the age represented by the policy holder in question. That part of the level premiums which is in excess of the current cost of

insurance is improved with interest and reserved to counter-balance the deficiencies of later level premiums. In other words, every level premium embraces an investment reserve, in addition to other elements which need not be discussed here, with which future losses are met. Under a natural premium plan the policy holder—again disregarding loading, etc.—pays just enough to cover the cost of insurance for his age, and no more. Natural premiums are, consequently, low during youth and increase with advancing years, until finally they become practically prohibitive. Assuming that the premiums are payable at the beginning of the year, it is evident that even under the natural system some reserve exists with which to meet losses during the year. This form of reserve may be termed insurance reserve. It is used to meet current losses and is greatest at the very opening of the year, gradually decreasing until at the end of the year it is completely exhausted.

The tables of the fraternal congress admit of both the reserve and the natural premium plans. The reserve plan involves the adoption of a level premium table like that given in column 3 of the comparative exhibit, and the natural plan is illustrated in the table given below. Both tables of rates are based upon the same mortality tables. The committee on rates of the fraternal congress has also prepared other modifications of the natural plan, but this one will suffice for purposes of illustration.

STEP-RATE AND MODIFICATIONS.

1. Ages.	2. Annual.	3. Monthly.	4. Monthly.	5. Monthly.
21-25	\$ 5.11	\$ 45	\$ 60	\$ 75
26-30	5.40	48	63	78
31-35	5.93	52	67	82
36-40	6.71	59	74	89
41-45	8.14	72	87	1.02
46-50	10.25	90	1.05	1.20
51-55	13.82	1.21	1.36	1.51
56-60	19.60	1.72	1.87	2.02
61-	54.01	4.73	3.00	2.50

The report of the committee contains the following explanation of this table: Column 2 gives the annual rates for the natural step-rate to age 61, and a level rate from that age for the balance of life. Column 3, the monthly rates as derived from the annual rates, with allowance for slight loss due to that method of payment. These two columns are the basis for calculating columns 4 and 5. Column 4 shows a modification of the natural step-rate by means of an accumulation of 15 cents per month, which is used to reduce the level cost from age 61 to \$3.00 per month. Column 5, a similar modification, but with an accumulation of 30 cents per month and a level cost from age 61 of \$2.50 per month. Under either of these plans all members pay the same rates at the same attained ages. The purpose in view in these tables is to have a plan that requires but little detail in its operation, so as to be readily comprehended by the officers of the local lodges. It will be noticed that an accumulation is provided for in the rates of columns 4 and 5. This is technically a form of reserve, and in so far as these accumulated funds permit the payment of premiums at advanced ages smaller than the cost of insurance, they perform exactly the same function as those performed by the reserve under the level premium system. The expediency of such an accumulation plan can scarcely be questioned. Fraternal societies have suffered again and again from losses in membership due to an increase in the size and number of assessments, or both. Men seem to object to constantly increasing payments, and in this lies the inherent weakness of the natural premium plan. It is thoroughly sound. It can not fail, but as a method of doing business it has serious faults; and, as long as human nature remains what it has been and still is, the natural plan is open to strong objections. Remembering that out of every thousand fraternal policies ninety four lapsed during the year 1898, and that in one society nearly 23 per cent dropped out, it is safe to assume that a more general introduction of the natural premium plan can only result in a continued high rate of lapses. The present high rate of lapses is unquestionably the result of a variety of causes, but it seems improbable that a system of premiums steadily increasing with the advancing years of the policy holder should

do anything to check this movement. From a business point of view the adoption of level rates seems most expedient. Furthermore, since fraternal societies avowedly find their constituencies among persons of limited financial resources, and whose earning capacity sometimes decreases rapidly after middle life has been reached, the introduction of limited payment certificates or policies is worth consideration. Not only does the natural plan with its markedly rising cost of insurance in the higher ages levy a severe tax on the earnings of the small policy holder, but the level premiums even may become too burdensome. Fraternal societies strive to furnish, among other benefits, pure whole life insurance. When this involves lifelong annual or other periodical payments, the policy holder can see no end except death, to the number of his contributions. This objection holds against all whole life, unlimited payments policies; and consequently all insurance organizations must meet this proposition. It seems desirable that a person's heaviest contributions should fall within the most productive years of his life. Both the experience of fraternal societies with increasing assessments and the composition of their membership point to the desirability of the introduction of some limited payment premium systems. Mortality tables can be elaborated with mathematical precision, and fraternal as well as commercial insurance ultimately rests upon the same insurance principles. Two important points of superiority claimed for fraternal insurance are better selection and lower expense rates. The former, it is claimed, is in part due to the double selection coincident with the lodge system, under which the medical examination of the applicant is supplemented by the test of meeting the approval of the membership of the lodge. Points which might escape detection by the medical examiner may be known to individual lodge members, and this would be sufficient to reject the risk. The latter—the expense item—is made much of. By confining themselves to pure insurance, i. e., insurance free from investment and speculative elements, fraternal societies claim that they can conduct their business with much greater economy. Fraternal officers point with pride to an estimated average expense of \$1.03 for every \$1,000 of insurance in force among

the forty seven societies comprising the congress, while twenty eight old line companies, in their reports to insurance departments, show an expense of \$10.30 per \$1,000, or exactly ten times as large. Because of the many differences existing in the two systems in the kinds of policies written, this comparison of expenses may require modification; yet it must be admitted that the ambition of fraternal societies to furnish pure insurance at the lowest possible cost to the policy holder is a commendable one, and capable of diffusing the benefits of insurance among much wider circles than has hitherto been possible. Old line companies have been introducing reforms in their systems of paying commissions to agents; and the desirability of limiting, by statute, the aggregate amount of insurance in force in any one company has been seriously proposed by officials of our giant companies. The possibilities of the fraternal system, when once thoroughly reduced to a sound business basis, are practically unlimited.

The demand for greater uniformity among the laws of the several states or for federal legislation is very strong. Some of the ablest and most prominent fraternal officials favor a federal law and national supervision. This involves constitutional questions concerning which nothing need be said in this connection. It also calls forth diverse opinions with respect to the question of greater centralization of power in the federal government. However, there can be but one opinion as to the desirability of greater uniformity, whether brought about by congressional action or by concerted movements in the different states. The National Fraternal congress, through its representatives, has for several years been striving to secure the adoption of the uniform bill, the chief contents of which can be briefly indicated.

The bill is entitled, An act regulating fraternal beneficiary societies, orders or associations. Section 1 opens with a definition, which is conspicuously wanting in most of the existing laws. This definition is but an elaboration of what were enumerated as the essential characteristics of a fraternal society, at the organization meeting of the congress in 1886, and which have since been modified and repeated in successive editions of the constitution of the congress. No society is considered

fraternal unless it practices a ritual, has a system of lodges, a representative form of government, pays benefits, and does not conduct its business for profit. At the meeting of the congress in 1900, a representative form of government was defined as "one in which there is a corporate meeting of the supreme legislative body, provided for as often as once every three years, to be composed of the officers and, in addition, delegates representing the membership; to which meeting sole power is given to adopt and amend by-laws, and to elect the chief officers of the order, and in which the term of no officer so elected shall be longer than until the next regular session of such governing body." Both the law and the constitution of the congress distinguish sharply between assessment and fraternal societies. A fraternal society may adopt an assessment system of benefits, but it must, in addition, possess all the other fraternal elements; while an assessment society does not necessarily incorporate one or more of the fraternal characteristics. A fraternal society may consequently be an assessment society (until after the general adoption of level or step rates), but a pure assessment society is not a fraternal society. In some states special laws have been enacted to govern old line, assessment, and fraternal insurance organizations, respectively.

Any society coming within the description just given, but organized under the laws of another state, may be admitted to a state having adopted the uniform law, by appointing the insurance commissioner as its legal representative, and filing its charter, constitution, etc., for which a small fee is charged. Societies of other states, on application, may be examined by the insurance commissioner at a cost not to exceed \$50, in certain cases. The president of the last congress, in his annual report, favors a graduation of fees for examination, varying from \$100 to \$500, depending upon the membership of the society examined. That the limitation of fees to be paid to examiners is necessary, the experience of one large order demonstrates. This society uncomplainingly paid \$2,307.40 for an examination made, at its request, by the insurance department of one of the states. Not long after, the officers of another state appeared, to make a similar examination. When

told of the thorough examination recently made by the officers of a different state, the society was informed that such an examination could not be accepted by the department of this state. A second examination was made, for which the society paid \$1,615.50. Irrespective of the merits of these two examinations, it is evident that in such damnable iteration lies a real evil which the law should remedy. A single thorough examination by competent men ought to be sufficient to satisfy every insurance department. The law allows a larger fee for the examination of societies which have a reserve fund,—the uniform bill providing that any fraternal beneficiary association may create, maintain, disburse and apply a reserve or emergency fund in accordance with its constitution or by-laws. The proposed law calls for an annual report to the commissioner of insurance, embracing twenty five items. Such report shall be in lieu of all other reports required by any other law, thus doing away with the objectionable multiplicity of reports. The twenty five items in the report, taken collectively, are sufficiently comprehensive in their scope to give the officers of the state an intelligent view of the condition of the organization submitting the same. However, the commissioner of insurance is authorized to address any additional inquiries to any such organization in relation to its doings or condition, or any other matter connected with its transactions. The incorporation of new societies is provided for; and the employment of paid agents, except in the organization or building up of subordinate bodies, is prohibited. The present laws of several states contain an absurd provision making the employment of a paid agent a chief test of the fraternal character of the organization. It is needless to add that the employment of any agent, paid or unpaid, to solicit insurance for an organization which does not provide insurance which is absolutely sound should be forbidden. That provision of the proposed law which makes a contract invalid if the beneficiary agrees to pay the dues of the member is of doubtful utility, because numerous instances may arise in which such a course of procedure would be beneficial to both parties. The usual penalties are imposed for violations of the law; methods of judicial

procedure are described; and all previous laws inconsistent with the act repealed.

The National Fraternal congress has repeatedly been mentioned. Without fear of successful contradiction, one may say unhesitatingly that no other factor in the fraternal world to-day approaches in its importance the national congress. A careful study of the proceedings of this body will convince the student that from first to last it has stood for enlightened and progressive measures which have long begun to bear fruit in the reforms which have resulted from them.

The idea of such a congress originated in the state of New York, where the local societies had organized a state federation for the promotion of their own interests. In response to a call issued by the Ancient Order of United Workmen, the father of modern fraternalism in the United States, a convention of representatives of fraternal societies was held in Washington, D. C., in November, 1886. This organization session included delegates from seventeen orders with an aggregate membership of 535,000, carrying insurance to the amount of 1,200 millions. The latest congress embraced forty seven orders with an aggregate membership of 2,668,649, carrying insurance to the amount of 4,021 millions of dollars and having paid over thirty eight millions in benefits during the year. These statements reflect the magnitude of the interests centered in the National Fraternal congress. The objects of the congress, as defined in its constitution, are declared to be the uniting permanently of all legitimate fraternal benefit societies for the purposes of mutual information, benefit and protection. Representation in the congress is graded according to the membership of the respective societies. Eligibility for membership on the part of a society is contingent upon meeting the requirements of the definition of a fraternal society, contained in the uniform bill discussed above, which, in turn, is but a modified statement of the distinctive features of a fraternal benefit society as enumerated in a clause of the constitution of the congress from the time of its organization. Membership in the congress further involves the payment of an annual fee, varying from thirty five to one hundred and fifty dollars. The constitution institutes the usual set of officers with customary

duties, and establishes seven standing committees dealing with the constitution and laws, statutory legislation, credentials and finance, statistics and good of the orders, fraternal press, jurisprudence and medical examinations, respectively. The powers and duties of these committees are also defined. Finally, the constitution repudiates the speculative societies, whose chief aim is to pay sums of money to members during life, without regard to distress or physical disability; and declares that the aims of such societies are entirely opposed to the principles upon which the fraternal beneficiary societies are founded, and by virtue of which they exist. The congress meets partly in sections, the two chief sections being the medical and that on the fraternal press. The latter, by unifying and uniting the interests of the various fraternal publications, is capable of diffusing the knowledge which is essential for the permanent establishment of a sound understanding and the full recognition of true conditions. The former has been aiming at the improvement of medical selection. The personal element being so important in the fraternal system, greater care and efficiency in the selection of risks reacts favorably upon the personal habits of members. A thorough medical examination as a necessary preliminary for participation in a system of benefits is a valuable lesson in right living. A bureau of information has also been proposed and discussed. The helpfulness of such a bureau can scarcely be overestimated, for, as a whole, the system is suffering from want of sufficient and accurate information. Not until the accumulated experience of fraternal societies has been scientifically formulated and applied to their financial operations can fraternal insurance be said to have reached the dignity of an economic institution. One society has adopted the combined experience of four other orders, until its own experience may have become sufficiently comprehensive. This is correct in principle, and will tend to banish the grotesque systems of guess work which at present are altogether too common.

GROWTH OF SECRET SOCIETIES.

BY WILLIAM WALLACE PHELPS.

[William Wallace Phelps, attorney; born Red Wing, Minn., 1869; educated at the University of Michigan and Yale university, graduating from the law department of Yale in 1894, since which time he has been engaged in the practice of law; has made a thorough study of secret societies, their history, methods and influence upon American life. Author of many articles, especially on legal topics.]

Every fifth man with whom you shake hands in the United States is a member of a secret organization, counting out his possible college fraternity.

Ten years ago a liberal estimate was one man to every eight in secret orders.

At the present rate of growth in the United States the present ratio of one to five may be three to five in 1914. For in the United States, where the population increases one tenth in a decade, the figures of the secret societies in ten years have been almost doubled.

In the year of 1904 the figures of the secret orders, reported by the central organizations, show a membership of 7,414,173.

In 1894 these figures, reported in the same manner, showed a membership of only 4,126,375.

Thus while the population of the United States was increasing a possible 20,000,000, the memberships in the secret societies were increasing nearly 3,300,000—a virtual doubling of these memberships.

Considering these figures for ten years in their application to the whole country, there is a striking comparison in the statement that in the last year in Illinois the increase in the memberships of masonic lodges is greater than ever before in the history of the state.

A tabulated statement of the memberships in secret societies for 1894 and for 1904 shows in detail where these gains have come in for the secret orders. The table is not complete as to all organizations in detail, but the sums in total are as nearly correct as may be possible:

	1894.	1904.
Oddfellows.....	746,484	1,193,749
Free Masons.....	722,333	965,000
Knights of Pythias.....	413,944	562,327
Ancient Order of United Workmen....	325,000	460,000
Junior Order of United Mechanics.....	175,000	116,106
Improved Order of Red Men.....	153,550	334,495
Knights of Honor.....	129,128	52,000
Royal Arcanum.....	143,368	277,974
Ancient Order of Hibernians of America.	100,000	145,000
Ancient Order of Foresters of America	115,000	221,974
Knights of the Maccabees.....	96,338	350,441
Knights and Ladies of Honor.....	73,000	73,000
Modern Woodmen of America.....	85,617	711,923
Sons of Temperance.....	67,603	34,789
American Legion of Honor.....	62,303	.....
Order of United Mechanics.....	50,464	43,582
Ladies of the Maccabees.....	.....	130,268
Knights of the Modern Maccabees....	.....	115,522
Knights of Columbus.....	.....	98,000
Ladies' Catholic Benevolent association	.....	87,400
Knights of the Golden Eagle.....	.....	70,000
Tribe of Ben Hur.....	.....	68,813
Woodmen of the World.....	.....	217,000
Knights of Malta.....	.....	27,000
Equitable Aid union.....	37,460	.....
National Union.....	34,678	67,223
Royal Templars of Temperance.....	27,311	.....
Order of Chosen Friends.....	41,274	.....
Catholic Mutual Benefit association...	38,000	62,000
Benevolent and Protective Order of Elks	35,000	154,000
Catholic Benevolent Legion.....	32,000	38,286
Ancient Order of Foresters.....	30,428	38,789
Independent Order of B'nai B'rith....	30,000	30,000
Brotherhood of Railway Trainmen....	25,000	.....
Catholic Knights of America.....	24,000	.....
Order of United Friends.....	20,164	.....
Order of the Golden Cross.....	20,275	.....
United Order of Pilgrim Fathers.....	15,600	.....
Ancient Order of Druids.....	15,000	.....
Improved Order of Heptasophs.....	15,217	57,255
Order of Eagles.....	.....	67,000

Court of Honor		66,449
Protected Home Circle		55,000
B'rith Abraham Order		42,781
Brotherhood of American Yeomen		37,684
Order of Gleaners		37,400
Independent Order of Foresters		220,000
New England Order of Protection	14,996	33,361
Royal Society of Good Fellows	11,055	.....
Smaller organizations	190,000	361,592
Total	4,126,375	7,414,173

Some of the societies not mentioned in the reports ten years ago are shown in the reports of the present year as having large memberships, while some of those making a showing at that time have disappeared altogether. At the head of the list, however, the Odd Fellows, the Freemasons, and the Knights of Pythias show where nearly 1,000,000 of the increase in memberships has come.

Other fraternal organizations have outgrown these pioneers in secret orders. With the accentuated insurance features of many of these, however, the comparisons are lost in great measure. Figures for the Modern Woodmen of America indicate a growth of more than 600,000 in ten years; the Independent Order of Foresters is listed for the first time with 220,000 members; the Woodmen of the World show 217,000; the Knights of the Maccabees show 160,000; and the Improved Order of Red Men nearly 200,000, while in the grouped smaller organizations the increase is nearly 200,000 in ten years.

These phenomenal growths in secret societies in America probably will appeal as strongly to the anti-secret society element as they can to the secret orders themselves. Masonry, as one of the oldest of these orders, has been the target for attacks, criticisms, vituperations, and exposes, beyond the records of any other secret body. But its figures of growth are second only to those of the order of Odd Fellows. This growth, too, has been in the face of the admonition to all members of masonic orders that they shall not invite any man to become a mason.

This admonition is as binding as a law, said Banker Leroy A. Goddard, grand treasurer of the grand lodge of free and

accepted masons of Illinois and the high priest of the royal arch masons of the state. Did any mason ever ask you to join his lodge? I think not; you might ask a hundred outsiders anywhere in the city and hear the same negative answer. Yet in view of this statement, the lodges of Illinois have shown a net increase of 4,254 members for the year ending on June 30, while the gross increase over all deaths, withdrawals, and expulsions is 7,455. At that date, too, the total membership for the state was 70,921.

For this phenomenal growth in the last year it would be hard to give a material reason; that is, a reason showing causes over another year's figures. Good times always has its influences upon new memberships, just as it influences other actions of men where money is to be expended for any purpose. But it may be said that ever since the Civil war the growth of masonry in this country has been steady and without a hitch.

There is no other reason at the bottom than that masonry is holding out something to men which they can not get anywhere else. It is the unspoken influence of the individual mason which impels the man outside the organization to ask to come into it. This individual, in seeking so come in, will be called upon for witnesses to his good character and to the good motives prompting him to seek entrance into the order. Two men at least will have to testify to these qualifications, and when these have testified, a committee takes up the question and passes finally upon the merits of the candidate.

The greatest critic of masonry will not find ground for questioning the manner in which masonic memberships are acquired. And it may be said that when a lodge has been formed, its memberships will rank with any similar order or brotherhood in existence. There are 732 lodges in Illinois, for instance, and at the annual meeting of the grand lodge there are virtually 1,000 delegates to it, gathered into the hall. In the personality of these men there is no governmental body in the United States that will overshadow these delegates in character and intellect and genuine democracy.

There is no caste spirit in masonry, and to this extent the mason in his lodge rooms is in an atmosphere that he can not find anywhere else. Out in the world, in any walk of life, he

feels the competition of caste, and wealth, and place; in his lodge a mason is a mason, neither better nor worse than another. No member could say, "I am better than you," for the reason that there is no call for such a feeling, to say nothing of its expression.

There are benefits in material ways in memberships in the masonic order, but they are benefits so wholly incidental that they fade into insignificance compared with the moral and spiritual benefits. So clearly is this recognized in the order, and so vital is the principle, that any candidate suspected of counting upon these material advantages would be denied admission to the society. Death benefits and relief to the widowed and the orphaned grow out of the brotherhood when brotherly sympathies have been awakened. They are not things to induce brotherhood as a mere means to a selfish end.

It is recognized that the growth in all secret orders in this country in the main has been steady and large. Without taking to masonry too much of the glory possible to the conditions, I would say at the least that the influence of masonry has been reflected in every one of these secret orders. Since the eighteenth century the influence of the organization has been felt among men. Attacks of all kinds have been made upon it, but it has grown steadily in spite of all. To-day, if a man would know what masonry is, let him judge by the masons.

PRINCIPLES OF REFORM IN PENAL LAW.

BY CHARLTON T. LEWIS.

[Charlton Thomas Lewis, lawyer; born West Chester, Pa., February 25, 1834; prepared for college at West Chester High school; graduated Yale, 1853; studied law 1853-4; studied for Methodist ministry, 1855-6; professor of languages, Illinois normal university, 1856-7; professor mathematics Troy university, 1858; Greek, 1859-62; U. S. Deputy commissioner of internal revenue, 1863-4; practiced law in New York, 1864-70; managing editor New York Post, 1870-1; secretary and treasurer New York Chamber Life Insurance, 1873-7; practiced law in New York since 1877.]

Copyright 1903 by American Academy of Political and Social Science

The traditional methods of dealing with crime and the conceptions and habits of thought which sustain them form a stronghold of conservatism. To attack it is to meet the reproach of devotion to mere theory and abandonment of practical good sense. It is time for reformers to show that the reproach properly falls upon prevailing notions and practices, and that there is a pressing necessity for a scientific study of the subject in the light of human nature and of experience. Penal law as it exists has grown out of the theoretic study of crime as an entity. Its proper basis is the practical study of criminals as men. Its lack of a controlling principle is not merely a fatal defect in its theory, but makes it, if not valueless, of very imperfect utility.

The end in view in society's dealing with crime should be its own protection. The ideal to be held before it is the elimination of crime. This aim is already recognized in many branches of law and administration as a potent motive. The police system is organized for the prevention of crime. Public education is largely supported with the same end in view. Many costly institutions, such as houses of refuge, protectories and juvenile reformatories, are maintained by the state mainly in the hope that characters tending to criminality may be diverted to true citizenship. But the general system of dealing with actual offenders against the law has been framed with no such definite purpose. It has gradually grown up by the assumption on the part of organized society of the right of retaliation, modified more and more by a superficial conception of distributive justice. Our penal law now undertakes to assign to each offense a punishment proportioned to its de-

merits. The fundamental principle of any reform must lie in doing away entirely with the conception of a scale of desert among offenses, and in substituting for it harmonious and consistent methods of dealing with each criminal, as the interests of society demand. Instead of undertaking the impossible task of inflicting just punishment for past acts, the law must seek to insure the avoidance of unsocial acts in the future.

Thoughtful minds have been profoundly stirred in recent years by the obvious failure of our penal laws to suppress or diminish crime. Some of the causes of this failure are obvious, and efforts have been made in many jurisdictions to remove these by special laws or detailed amendments to existing codes. But these efforts have been largely fitful and experimental, not being founded upon any comprehensive principle inspiring the entire policy of the state. Among the obvious abuses of penal administration to which attention has been widely directed, the most conspicuous is the prevalent system of county jails. In the local prisons, for the detention of minor offenders and persons awaiting trial, the amelioration of conditions during the last century has been less marked than in any other public institutions known to our civilization. In 1827 the Reverend Sydney Smith wrote: "There are in every county in England large public schools, maintained at the expense of the county, for the encouragement of profligacy and vice and for providing for a proper succession of house breakers, profligates and thieves. They are schools, too, conducted without the slightest degree of partiality and favor, there being no man (however mean his birth or obscure his situation) who may not easily procure admission to them. The moment any young person evidences the slightest propensity for these pursuits, he is provided with good clothing and lodging and put to his studies under the most accomplished thieves and cut-throats the county can supply." These conditions have been largely changed in England, but they prevail to a surprising extent to-day in a majority of our states. It is a very general practice to pay the sheriffs or other officers in charge of the jails by a daily allowance for each prisoner, nominally for his support, but large enough to insure a substantial profit, so that the absolute master of the unfortunate inmates for the time being

has a direct pecuniary interest in keeping them as long as possible in confinement and in feeding them cheaply.

These jails are now the chief schools of crime and the great recruiting offices for the army of criminals. There are few habitual criminals but have been educated in them. In some counties there is no proper separation even of the sexes; in very many there is none between the convict and the accused, or even the witnesses under detention; between the professional burglar or thief and the unruly boy. In nearly all, the inmates are chiefly idle. These monstrous conditions are maintained by the local authorities, mainly on the pretext of economy, in violation of the explicit laws of many states. They are attracting much attention, and in special instances have been mitigated. The fee system in the jails, too, must soon pass away. Reformers generally believe that all jails must be brought under the direct control of the state. Certain it is that the local jails in Great Britain, which were no better than ours before 1878, when they were brought under the centralized administration of the home office, have been nearly freed from these evils. There has since been a large reduction of the number of inmates and even of the number of jails. There is reason to believe that the supply of criminals has been largely checked by the change. A similar centralization of control in our states would doubtless effect excellent results, if exclusion of political influences from the state prison authorities were assured.

But another tendency is at work upon our laws which is at war with all reform. Every student must recognize the pernicious effect of short terms of imprisonment for minor offenses. Apart from the corrupting associations of most local jails, confinement for a few days or weeks is demoralizing and degrading. It brands the prisoner as a jail bird, and embarrasses his future. He often comes out stripped of self respect, suspected and despised by others, and is driven permanently into crime. Such sentences have no tendency to reform the erring. They are dictated solely by the absurd notion that they are fit punishment for minor offenses. But the number of such sentences is very great. Our police magistrates and petty tribunals are busy inflicting them,

partly on rounders or habitual misdemeanants, frequently on the young who have for once impulsively or even inadvertently gone wrong. Now, while the uselessness and harmfulness of such sentences are well understood, and while the courts, under the pressure of public opinion, are increasingly loath to inflict them, the number of offenses to which they are legally assigned is steadily increasing.

As society grows in complexity and the standard of social conduct is raised, there is a constant increase in the recognized obligations of the individual. New rights and new duties emerge, and the violations of them become new crimes. It is often observed that the improvement of public order and of the general conscience are marked by an increase in the number of legal offenders. For many acts are now prohibited as offenses upon which the laws were formerly silent. Thus the business of criminal courts and prisons may be greater than before, when there is much less of real or serious crime. It has even been suggested that the increase of crime becomes in this way a mark of advancing civilization. But the paradox is superficial, and turns upon an ambiguous use of the word crime.

It is a fact, however, that legislatures in their desire to suppress any practice which is pernicious or inconvenient are prone to define it as a crime, and to make it punishable by a term in jail. Thus New York, within five years, has added about thirty to the list of offenses which the penal code denounces as worthy of imprisonment. Any person who lends or gives to another a newspaper chiefly made up of police reports must be sent to jail for at least ten days. One who sells a cigar on Sunday, or eats peanuts in a religious meeting, or, being a nonresident, gathers oysters in the state, may be imprisoned for a few days or weeks. A multitude of acts which may easily be committed by mere inadvertence are made misdemeanors and may be punished by incarceration for any fraction of a year. The mother of a child whose eye is red from any cause, who does not at once inform a physician; the brakeman who couples a freight car after a passenger car; the citizen who advises his friend to leave the railroad service rather than wear a uniform; the layman who has an ounce of

ether in his pocket without proof that he had no intention of improperly administering it as an anesthetic; each of these is a criminal before the law. If such statutes are enforced, they confound the public sense of justice, and become intolerably oppressive. But they can not be generally enforced, and their empty threats of severity bring law itself into contempt. The constant increase in the list of such offenses, however, adds materially to the number of moral and social victims of the local jails.

In our modern penal codes, imprisonment has become the usual mode of punishment for almost every crime. The old fashioned spirit of vindictiveness which dictated the infliction of suffering upon offenders has passed away under humane influences. The whipping post, the pillory, mutilations of various kinds, have been superseded by terms of imprisonment, and the tendency of what is called scientific penal legislation is more and more to limit legal penalties to confinement of more or less severity and of greater or less duration. The question of what value there is in imprisonment, therefore, is of pressing importance, yet it can not be said ever to have been satisfactorily investigated.

If imprisonment on the whole does good, it must be either, first, as a just retribution, the infliction of which satisfies the moral sense of the community; or, secondly, as disarming the enemy of society and so protecting the community against him; or, thirdly, as tending to the conciliation of the character at war with men, by making him fit for citizenship. A proper study of the subject will address itself to the actual efficiency of imprisonment as an agency for each of these three purposes.

The conception of just punishment, though loosely held and associated vaguely with other ideas, is doubtless the foundation of penal law in the minds of most men. Incidentally it is at times insisted that the chief practical value of punishment lies in its deterrent influence. The fear of the penalty is supposed to prevent crime. This consideration often influences legislation, and sometimes shapes the sentences passed by courts; but all experience has shown that the real deterrent effectiveness of even the severest penalties is insignificant in its influence upon the volume of crime at large. In fact, it is

hardly felt at all except by habitual criminals, and then mainly in determining them to avoid crimes which are easily detected. Upon offenses of sudden impulse, and upon the whole class of crimes which are first steps in a downward career, the threat of punishment has practically no influence.

But the avowed purpose of every criminal code is to apportion penalties according to the demerit of offenses. If the attempt to do this is a failure the entire system must be rejected as valueless. Now there is no superstition in the range of human thought more empty and unfounded than the belief that any penal code does or can assign punishments in any fair measure proportioned to the desert of offenses. The most superficial comparison of the codes of different states and countries will show, not only that no rational principle controls the actual assignment of penalties, but that no such principle can be found. Who can measure the comparative merit of offenders by the names of particular acts which have been proved against them? The attempt to do so in legislation results in the most surprising inconsistencies. For example, as maximum penalties, Virginia inflicts six months' imprisonment for incest, and eight years for bigamy, but Colorado assigns twenty years for incest and two years for bigamy. The guilt of forgery is to that of larceny as four to one in Kansas, and as one to four in Connecticut. The actual average sentence inflicted in Maine for perjury is one year, but in Florida it is ten years. The average sentence for robbery in California is one year, in Alabama it is twenty two years. The man who in New York carries ether in his pocket, without proof that his intent is innocent, has precisely the same punishment denounced against him by law as the man who is guilty of incest or the man who attempts by poison to kill another; a penalty twice as great as is provided for the forger of stamps, the bigamist, the blackmailer, or the seducer under promise of marriage. These illustrations might be multiplied. There is not a page of any penal code in Christendom which does not suggest difficulties and embarrassments in the adjustment of punishments to crimes which are entirely insuperable. No rational purpose can be served by such a system. It is but the inertia of tradition and habit which preserves it.

It being evident, then, that the conception of penal law as a system of just retribution is without validity and without utility, it remains to consider what service, if any, the practice of imprisonment renders to society. It must be admitted that life in confinement and cut off from association with others is unnatural. A long period of complete subjection to the will of others and without individual initiative, results, except for characters of unusual strength, in a paralysis of will. Nothing can unfit a man for society so surely as cutting him off from all society. It is, therefore, a first principle of reform that only necessity can justify imprisonment. A person who can be at large with safety to others ought never to be subjected to a term in prison. If it is unsafe for the community that he should be free, he must be confined; but the duration of confinement must be determined by the duration of the necessity. In other words, the only rational system of imprisonment is that which limits its application to those who can not be trusted in freedom with safety for the rights of others, and all such should be subjected to such influences as will, if possible, prepare them for freedom, and released when they have given satisfactory evidence that confinement is no longer necessary. This is the great principle of the indeterminate sentence, which is the recognized basis of reform legislation in many of the states of the union; but it has been as yet timidly and imperfectly embodied even in the foremost penal codes. One of its most valuable features, to which too little attention has been directed, is that it leads to the permanent seclusion of the irreclaimable. If crime is ever to be extirpated, society must be resolute in its dealings with habitual and professional criminals. Any system which treats a recognized enemy of human society on the basis of a single act, and fixes, in view of that act, a definite term at the end of which he must be freed, to prey upon his fellows, is a foreordained failure.

It must not be disguised that these principles will necessarily lead to a large disuse of imprisonment. A growing sense of the evils which follow the practice, and especially of the fact that prisons and jails are the channels of supply for the criminal class at large, has already pressed strongly upon thoughtful men the necessity of finding a substitute for con-

finement. The probation laws of Massachusetts and of several other states have made an important beginning in this direction. It has been found that multitudes of the young, who have seemingly set out on the way to a criminal life, can be diverted from it and made decent citizens, if instead of the contamination and weakening influence of imprisonment, they are subjected to proper moral and social supervision under the intelligent direction of the court. There can be no doubt that the future progress of reform in penal law lies very largely in the direction of extending the scope of probation laws. Indeed, supervision and guidance by wise agencies wherever they have been applied to those who are discharged after a term of imprisonment, have been found at least as valuable in their reformatory influence as the best systems of discipline and education within the walls of institutions. The more efficiently such supervision can be exercised, the more successful will be our campaign against crime; and it is not too much to hope that in the progress of civilization the community at large will take, not only a deeper interest, but a progressively more active and useful part in this supervision.

EVOLUTION IN REFORMATORY METHODS.

BY LYMAN D. DRAKE.

[Lyman D. Drake, superintendent of the Iowa industrial home for boys, has been in charge of that institution since 1904; previously he was for sixteen years head of the manual training school at Boonville, Mo.; Mr. Drake's theory is that the delinquent juveniles should be taught useful trades, and he has put these theories into practice by teaching such trades to more than 1,000 boys who have been under his direction.]

Time writes many changes and has written them rapidly. This is true of institutions for juvenile delinquents, and the methods being pursued at present compared with those of the incipient days of so-called reformatories impress us with the rapid strides being made in this progressive age.

Questions of economics and others of equal importance have claimed much of the best thought, and not until within the past quarter of a century has the social problem claimed more than passing attention and the scientific research necessary to the securing of best results. The achievements in this particular have been scarcely less than those attained by the arts and sciences. Each stimulated to greater activity in consequence of some material advancement, so that to-day in our retrospection we are filled with joy and satisfaction at the sight of nearly one hundred magnificent institutions, which are devoting both time and energy to the restoration of the delinquent children of our land.

We must begin our investigation by going back to the seventeenth century, when the San Michale at Rome held the juvenile for restraint without thought for the welfare of the youth other than his confinement. Conditions did not improve with the establishment of other institutions, and not until late in the eighteenth century did the institutions of England and France of a similar character show any improvement.

Early in the nineteenth century there came a ray of light and hope to the delinquent boy and girl, and this must be attributed to the wisdom of Dr. Wischern of Hamburg, Germany, who created Das Rauhe Haus in the year 1833, this institution being the first of the open institutions for the de-

tention of juvenile offenders. The first institution founded in the United States was the result and consummation of a corporation organized in the city of New York. This was in the year 1824, and the institution above referred to afterward became the House of Refuge now located on Randal's island. In this house of refuge dependents, defectives, and delinquents were alike confined. Cellular confinement seemed to be the one idea; and while there was apparently sufficient philanthropic zest upon the part of those in authority or control, one can scarcely reflect upon such action without a shudder.

Massachusetts soon followed with the establishment of an institution which presented conditions somewhat more favorable to those confined within its walls. Not long afterwards Ohio took up the inspiration and in the year 1855 a commission was appointed with instructions to visit the German institution near Hamburg. Upon a thorough investigation they returned and in their report recommended to the general assembly of Ohio the establishment of an open or cottage system to be known as a reform farm school for the reformation of refractory youth, with some modifications, however, upon the German idea. We here note the first appearance of the word school attending an institution for the correction of juvenile delinquents. Changes are rapidly taking place, each year adding something of benefit. The idea of cellular confinement has given place to that of education and occupation. While there were many things in those institutions that did not reflect upon them a very considerable credit, yet the primitive idea was giving way to methods more advanced and beneficial. Still in this particular they appeared more than a century behind the achievements of our modern methods, which have made it possible for over thirty thousand boys and girls to enjoy the benefits of an expenditure of more than twenty five millions of dollars.

I alluded to the spirit that actuated the establishment of our institutions in earlier days by men of strong intellect, and possessed of such qualities as characterized them as being best fitted for the work undertaken; yet should I narrate incidents which were actual facts connected with institutions under their supervision, you would be disgusted with the very

thought, and regard the word reformatory as a misnomer. Within my own experience I have seen boys who were fed much after the manner you would feed dumb brutes. I have seen meats in a decaying state, intended for their food, cooked and thrown into a large pan in the center of a table, and after a display of civilization, insomuch that a pretense of asking the blessing was made, where the boy would cover his face with his hands, yet all the while looking through his fingers with his eyes fixed upon a piece of this flesh, waiting for a signal when all who were so fortunate might get his hand into this much sought-after pan and gather to himself something whereby his hunger might be appeased.

I have also followed, with silent tread, a line of woe-begone fellows wending their way to a basement to partake of bread and water, this having been measured out to them as a punishment for some infraction of the rules of the institution; and the length of stay in this basement or the number of meals of bread and water depended upon the gravity of the offense committed.

I saw a man who bore the title of officer subordinate in authority only to the superintendent, with a heavy cane in his hand, deal blows that would render his victim unconscious. I have seen boys placed in confinement for weeks at a time and fed upon bread and water, while their quarters were so infested with vermin, that their minds gradually gave way under the strain. I have also seen the stocks used as a punishment, compelling the boy to sit in a broiling sun, with feet and hands pinioned, not being able to move them—and all of this taking place within the last quarter of a century in the midst of a so-called Christian and philanthropic people. Do you wonder at the delight occasioned at the dawning of a new era? So on through the years we are witnessing a gradual change from those methods which would be regarded as barbarous to the modern, well equipped, well managed, industrial training schools of to-day. While it has been distressing to me to furnish so painful a picture, yet another may be seen that brings joy to the heart and an inspiration causing us to go forward in this great work of uplifting humanity.

The cellular idea as heretofore referred to, has given place

to the cottage or home idea, where the neglected boy may enjoy the comforts and blessings of life that attend right living and right doing. An institution to-day without its schools and shops would be regarded with more or less suspicion. Our modern institution surrounds the boy with advantages second to none. His education in the school of letters is carefully looked after, he being under the instruction of capable, painstaking teachers, who devote their entire time to his welfare, and many institutions make education the standard by which he may secure his release from the institution; the purpose being to give every boy a good, common school education.

I am impressed, however, with this idea, that in order to have a well rounded man, we must have a well trained boy, one whose hands have been taught to work in harmony with his mind, becoming skilled in some useful occupation. In the years gone by, the primary consideration of a reformatory institution was to create some sort of occupation that would bring to the state as great a revenue as possible. "How much can a boy be made to earn?" was the thought foremost in the minds of those in authority. Think of it. The boys of the state, the state's money invested in them, the state hoping at some future time to have a return for this, which should be its good citizenship, rather than to know they had by some revenue creating occupation been made to partially compensate the state for the money expended in their behalf. Such ideas are degrading and debasing, making the labor of the boy the primary consideration instead of his education and reformation. I am happy to state that such conditions no longer exist, and nowhere within the United States to-day can be found an institution where the labor of its boys is being contracted, as was a fact in the years gone by.

The state to-day is making a vastly different investment. Boys are still being placed in reformatory institutions; the state continues to invest her money in these boys. Why? because of the fact that to-day the returns are a sufficient guarantee to continue this, as from seventy to eighty per cent of all the boys sent to institutions for correction, go out into the world again reformed in the fullest sense of the term.

Boys have now at their disposal skilled instructors, those

who are interested in their development, assuring a proper training. The services of our institution boys are being sought after in consequence of the thoroughness of their training. State prisons are not recruiting from the ranks of reformatories to the extent that has been done in the past. The institutions of to-day are engaging the best thought and zeal of the body politic. They are at last awakening to the fact that delinquency is a factor injurious to the great social fabric, which in consequence of its contaminating influences has caused more or less of decadence. Psychologists, sociologists and anthropologists are using their utmost endeavor to eradicate the evil through research and application. To arrest the cause is now the slogan. They are now engaging in the study of man, and the many influences used in this direction must of necessity result in great good. Reformatory institutions are and will be strong factors in the improvement of the substratum from which comes so much to contaminate.

The advantages of an up-to-date institution are so many and varied that one scarcely realizes the importance attached thereto. While an institution may never receive the credit of giving to the world men of great renown, yet the foundation for a successful life may be laid; the individual to be the architect of his own success or failure. So many things come within the range of possibility, that we can not with accuracy judge the outcome of close application and attention to duty. A successful institution is measured by its system and method, both of which call for accuracy even in the minutest detail. This becomes more important as the youth is so susceptible of training; and where results are expected to be satisfactory, which is the outgrowth of impression, the necessity of perfect method and system becomes apparent.

The completion of anything undertaken without making the importance of such an undertaking fully understood is harmful rather than beneficial, as impressions here find a lodgment and govern the future life of a boy to a greater or lesser degree. Our institutions of to-day are noting well the significance of this and each year adds greatly to the success attained.

There is nothing in my opinion so important in the educa-

tion and training of our youth as to teach them the nobility of **labor**. Those who have said, "The world owes me a living, **and I am bound to have it,**" furnish this sad spectacle and to **their own discomfiture**. On the other hand, the honest toiler, **who** embraces every opportunity for self advancement by **occupation** and endeavor, can rise to a height which seems to be limitless in consequence of the ingenuity of the man who **applies himself** and ennobles labor. Our boys can have no **better teaching** than this, all of which will assist them to rise **above** the necessities of to-day.

That which tends toward the elevation of the boy will reflect itself in the man insomuch as the boy is said to be the father of the man. While the achievements of the nineteenth century were marked in a degree in the advancement of our institution methods and reflect the zeal and labor fraught with more or less anxiety, it furnishes our workers of the present day with an inspiration to try to accomplish even greater things for those who require their help. The changes from the old to the new methods are certainly gratifying and satisfactory. To see the walls, bars, dungeons, stocks and chains, which were regarded as absolute necessities in the years gone by, disappear, and in their stead cottages or homes for boys with parks, lawns, flowers and the handiwork of nature's beauties to be seen on every side, certainly reflects the intelligence and zealous efforts of an advanced civilization.

In conclusion, let me suggest what I might term a model reformatory: First, an institution created by a magnanimous people for the sole purpose of reformation and not profit. The cottage system to be taken as the basic principle in its broadest sense. Boys to be carefully classified; congregating those only of like temperament, not to exceed thirty boys in a cottage; presided over by trained men and women, a living example worthy of the emulation of every boy; devoting their best thought and energy to the individual boy, transforming and reforming the crooked and gnarled into the symmetrical and stately. The occupation of the boys to be of such a character as may be best suited to the boy and his probable surroundings after returning to his home, with the military, music, and as many other influences as would feature the

institution, depriving it altogether, although an institution for juvenile delinquents, of a semblance of that which partakes of a penal institution. With athletics as prominent as is made by the highest and best institutions of learning throughout the land. With such inviting surroundings, boys would live in an altogether different atmosphere, dwelling in a refreshing sunlight, which, in my opinion, would be absorbed by nearly the entire population, and only those who from hereditary tendencies would be found upon the debit side of the ledger when a final summing up was made.

Such an institution as above described, is in my opinion, a possibility. Much has been done; more may be done. A superior business system in the management of institutions, together with the coöperation of a generous people augurs well for delinquent boys and girls. It has been my observation all through my years of experience that the reformation of boys is regarded with too little importance, the primary thought being to rid society of a boy whom they considered a menace. If investigations were made leading to the cause for the necessity of such restraint, society would in all probability be found responsible. The neglect of the child has led in a majority of cases to its delinquency. It is difficult to appreciate the necessity for the proper supervision of children unless the matter be made a personal one. When it concerns our immediate family, our interests become intensified and we wonder why conditions which have lead to certain effects have not in some way been counteracted before such injury was sustained. The world has been too busy with affairs of a vastly different character, and, as they are pleased to term it, of more importance. Does it occur to you that there is any thing more important than the saving to society of a human life? Were this question given the attention it merits, conditions would ere long show a greater improvement. People, generally speaking, are too unfamiliar with our institutions. The boys who go from them attract no particular attention. The good boy is never spoken of; the bad boy soon claims greater prominence than he deserves, and the school suffers accordingly. The public should be held responsible for this feeling, as their attitude toward the youth emerging from our institutions is such

as to make them feel that they are living in a disgrace that can not be overcome. We plead for charity, yet how uncharitable! We ask for justice, yet how prejudiced we are, all of this having a tendency to destroy our labor with the boy.

In this era of progress and reform may there not be more expected from the layman, giving inspiration and zeal to those whose lives are given to the work of scattering roses instead of thistles along the pathway of the unfortunate.

THE RACE PROBLEM AT THE SOUTH.

BY HILARY A. HERBERT.

[Hilary Abner Herbert, ex-secretary of the navy; born Laurensville, S. C., March 12, 1834; educated in the universities of Alabama and Virginia; admitted to the bar and practiced at Greenville, Ala.; captain and colonel of the 8th Alabama volunteers U. S. A.; located in Montgomery, Alabama, in 1872, and resumed law practice; member of congress, 1877-93; secretary of navy, 1893-7.]

This is a land of free speech. Americans may now discuss any where, north or south, even their negro question in all its bearings. This it has not always been easy to do, even in the historic city which claims the proud distinction of being the birthplace of American liberties. In 1859 George William Curtis became temporarily a hero by an antislavery speech in Philadelphia. A mob had gathered to prevent him, but the mayor of the city, backed by the police, succeeded in protecting the speaker, who delivered his address in spite of the missiles that were hurled into the room where he spoke. The next year, however, so violent were the passions of the day that the friends of that great orator could not hire a hall in that city for Mr. Curtis to lecture in, even on a subject totally disconnected with the negro, or with politics.

In those days the negro question was full of dynamite, because we then had in this country two systems, I might almost say two civilizations, one founded on free and the other intimately interwoven with and largely dependent upon slave labor. They were in sharp conflict with each other, and therefore it was that free discussion of the slavery question, or negro problem, was then sometimes difficult at the north, while it was every where impossible in the south. Abolition sentiment was proclaiming in the north that slavery must go, no matter at what cost. In the south, therefore, the stern law of self preservation demanded the rigid suppression of free speech on this question, lest discussion should incite insurrection, and light the midnight torch of the incendiary. In the north the motive of the mobs which, like those who gathered around Mr. Curtis here in 1859, and who called themselves

union men, was to prevent abolition speeches because they saw in them disunion or civil war, or it might be both civil war and disunion. The civil war came; it was terrible—more terrible than dreamer ever dreamed of. But it is over, and there will never be disunion; no one fears it now, because now no one desires it. Slavery is dead, and can never be resurrected. So, therefore, there is now nothing to hinder free speech in our country about the race problem in the south. If in 1861 there was dynamite in the negro question, so when that dynamite had exploded, and when states had been wrecked and social and economic systems shattered, the problems that grew out of the negro question were quite as exciting when up for discussion as had been slavery itself.

The most acute form in which this many-sided question then presented itself was suffrage, and every student now knows that political science played no part in its solution, that the reconstruction acts were passed and the fifteenth amendment was adopted when party spirit was more intolerant than it had ever been before, and the passions of war were still blazing fiercely. The constitution of the fathers was framed in Philadelphia after mature deliberation behind closed doors. The fifteenth amendment, changing that instrument fundamentally, was formulated after heated debate in congress, on the rostrum, and in the newspapers throughout the land. In debating the question of granting suffrage by law to millions of ex-slaves, and then of clinching the right by a constitutional provision intended to secure it forever, whether it worked for good or evil, the fundamental proposition for consideration should have been the fitness of the negro. Was he intellectually, by training and antecedents, competent to take part—often a controlling part—in the great business of government? But the case did not turn on that point, the discussion was always wide of that mark. The nearest approach to the question of the fitness of the ex-slave for the ballot was this argument: Did not the government free the negro? Was he not the ward of the nation? Did not the government owe him protection? And how could he protect himself without the ballot?

This, though fitness was assumed without argument to

support it, is the most defensible of all the grounds on which the fifteenth amendment became part of the constitution. If the negro had only possessed the qualifications which political science tells us are essential in those on whose shoulders rest the burdens of republican government, with the ballot in hand he would not only have protected himself, but he would have given to the southern states, and he would have helped to give to the nation, the blessings of good government. But the fitness for the ballot that had been taken for granted did not exist. The political structures based on negro ballots, like the house of the unwise man in the Scriptures, fell because they were builded upon sand.

Out of reconstruction and the fifteenth amendment have come many of the peculiar phases, and nearly all the aggravations which now beset the race problem of the south. In the days of reconstruction the teachings of political science as such, and of ethnology, its handmaid, had made but little impression in America. Political science had been taught, it is true, in William and Mary college, to Jefferson and other Virginia statesmen prior to the Revolution, and there were, prior to 1860, in a few scattered American colleges, solitary professors lecturing occasionally on the subject, but great schools of political science are of recent growth.

As our country expands it has need for wider knowledge. It is dealing now not only with its negroes in the south, but with Cuban and Porto Rican and Philippine populations, and it needs not only accurate knowledge of all these peoples; but, facing as we do a future that will bring to us questions as momentous as they will be novel, the time has come when we must search carefully for and familiarize our people with the lessons of our own history, that our experience may be a lamp to guide our feet. A few years ago Professor Cope, the great naturalist, made a notable contribution to the discussion of the race problem. It was a series of articles published in the *Open Court*, discussing, from the standpoint of a naturalist, the differences between the white man and the negro. He showed the inferiority of the negro, and contended that the mulatto was in many respects, which he carefully pointed out, inferior to both his parents. Then he left the firm ground of science on

which he was at home, and surmised that intermarriage would hereafter become common in the south. If this surmise should be correct, then there would follow, as he had proven, the destruction of a large portion of the finest race upon earth, the whites of the south. To prevent this result he argued that the government could well afford, whatever might be the cost, to deport all the negroes from the south. This admixture of the races, let us hope, will not take place, and deportation is impossible.

If these articles had been written and published in 1860 who can estimate the opprobrium that would have been heaped upon Professor Cope and the University of Pennsylvania. But in the nineties the publication excited no comment. It was simply a scientific contribution to the discussion of the negro question. The day of free thought and free speech even on our race problem had come.

So I am free to say that in my opinion the granting of universal suffrage to the negro was the mistake of the nineteenth century. I say that, believing myself to be a friend to the negro, willing and anxious that he shall have fair play and the fullest opportunity under the law to develop himself to his utmost capacity. Suffrage wronged the negro, because he could only develop by practicing industry and economy, while learning frugality. It was a mistake to tempt him away from the field of labor into the field of politics, where, as a rule, he could understand nothing that was taught him except the color line. Negro suffrage was a wrong to the white man of the south, for it brought him face to face with a situation in which he concluded, after some years of trial, that in order to preserve his civilization he must resort to fraud in elections; and fraud in elections, wherever it may be practiced, is like the deadly upas tree—it scatters its poisons in every direction. Universal suffrage in the south has demoralized our politics there. It has created a bitterness between the present generations of whites and blacks that had never existed between the ex-slave and his former master. Another crying evil that has resulted to the people of the south and of the whole union is that we now have an absolutely solid south, where the necessity for white supremacy is so dominant that no political ques-

can be discussed on its merits, and whites do not divide themselves between the two national parties. What we need in the southern states to-day, above all things, is two political parties, strong enough and able to deal with each other at arms' length.

The negro's prospects for improvement, his development since emancipation, his industrial conditions, his relation to crime, the scanty results of the system of education that has been pursued, how that system can be bettered—all these questions as they exist to-day are before us. Here and there, among southern people, are some who in despair are advocating that no more money be spent by the whites for the education of the blacks. This, I am glad to say, is not the prevailing sentiment. The southern people, as a rule, believe that we should continue to strive for the development of the negro and the lifting of him up to a higher plane, where he may be more useful to himself and to the state.

THE DEVELOPMENT OF PUBLIC LIBRARIES.

BY CHARLES AMMI CUTTER.

[Charles Ammi Cutter, late librarian of the Forbes library, was one of the most famous of American librarians, and his *Rules for a Dictionary Catalog* and his expansive classification are permanent contributions to library economy; born in Boston in 1837, he graduated from Harvard university in 1855, becoming assistant in the Harvard college library, librarian of the Boston Athenæum in 1869 and of the Forbes library in 1893; he was editor of the *Library Journal* 1881-93.]

Copyright 1902 by Evening Post Company

In the first year of the nineteenth century the United States, with a population of five and a third millions, had 64 libraries intended for popular use, or, if we call the parochial libraries founded by Dr. Bray public, and assume that most of them survived the Revolution, there were 100 libraries containing perhaps 50,000 volumes in all. In the last year of the century there were over 10,000 libraries owning 40,000,000 volumes, half of these libraries having over 1,000 volumes each. Thus, while our territory is less than four times as large and our population is only fourteen or fifteen times as large, there are one hundred times as many libraries containing eight hundred times as many books.

There is no means whatever of ascertaining how many volumes reached the readers of 1801, but it is unlikely that the output exceeded the stock, for it was a time of solid books and slow readers. In 1900, 50,000,000 volumes were issued; that is, the circulation has grown a thousandfold.

Americans have always been a bookish people. The very first colonists brought books with them from Europe. There were books, few but prized, in many households, and in time some private libraries of size and fame. Public libraries have a history almost as old. The Puritans had hardly landed when they founded a college and with it a library. Harvard college library, born in 1638, was followed in 1700 by two others, Yale and William and Mary; and by twelve others in the following hundred years, so that the last century began with 15 college libraries. It closed with over forty times as many.

Joint stock libraries, implying cities and a certain amount of wealth, were of later origin. The first was founded in 1731

(twenty seven years before the first proprietary library was established at Liverpool, England). By the end of the eighteenth century there were 32 such libraries. There are many more now, for they spread gradually throughout the country, often under the name of atheneum in the cities, and of social library in the country. But they are not flourishing as a class, for the free public libraries are slowly ousting them. People in general will not pay for reading when they can have it for nothing. A few, either from old habit, or because they dislike the rush and bustle of a public library, or because membership is regarded as a social distinction, will frequent the proprietary library and pay their yearly dues, but the receipts from this source are too small for its whole support. With a large invested fund it may survive; without one it is doomed either to be dissolved or to be absorbed by the free library. In those states, to be sure, where the latter has not gained a foothold, the proprietary library continues its good work, and new ones may spring up. They are then very useful in showing the people what libraries are and in preparing the way for the adoption of permissive or compulsory library laws. Many were founded in the decade before and the decade after the Civil war; yet in 1896 only 57 were reported that had over 1,000 volumes apiece

The libraries of 1801 were small in a degree hard to realize, with our present ideas of necessary size. The oldest of them, Harvard college, had in 1790 only 12,000 volumes; the largest, the Philadelphia library company, after absorbing three similar libraries, had in 1807 only 18,391; in 1793 the New York society library had 5,000; in 1791 Yale college had only 2,700; in 1811 the Charleston society library had reached 7,000, and in 1809 the Boston atheneum, founded only two years earlier, could report 5,750. These were the giants; no other library had 2,500; not half a dozen had 1,000; the average was 500.

The character of the libraries was much more solid, or, if one pleases, heavy, than now—necessarily so, for the books of that day were in greater proportion serious. The college libraries were of course designed to be learned, for the use of the professors chiefly. In them theology naturally held the

leading place, as the colleges had been founded mainly to educate ministers. So in the Harvard college library catalogue of 1790, 150 pages out of 350 are filled with theology, 10 with the Greek and Latin classics, 4 with books of travel, but only three fourths of a page with periodicals. In literature, however, one finds Chaucer, Shakespeare, Spenser, Milton, Dryden, Pope, Gay, the Gentleman's Magazine, Rabelais, La Fontaine, Voltaire, Boccaccio. In 1765 Yale college was "well furnished with ancient authors, such as the fathers, historians, classics, many and valuable works of divinity, history, philosophy, and mathematics, but not many authors who have written within these thirty years."

The social libraries were different. The library company of Philadelphia, whose selection probably was largely determined by Franklin's taste, no doubt was imitated by other proprietary libraries. It had scarcely one theological book or controversial tract; politics was not prominent; history, travels, science, natural history, and especially the mechanic arts, formed the bulk of the stock (but it must be remembered that a dozen of our sciences and a score of our arts had no existence then). Polite literature was scantily represented, especially in the department of fiction, the library committee in 1783 having instructed its London agent that though not averse to mingling the dulce with the utile, they did not care to have him buy any novels—a rule which has largely prevailed since.

Art, which in the last decade has begun to fill so large a place on our shelves, was not to be found in any of the early libraries. The Boston atheneum, however, received in 1838 from a generous proprietor a large number of works of art, and became the pioneer of bibliothecal art development.

The character of the reading differed somewhat from ours. It was in larger proportion the reading of the man who is curious about some one branch of knowledge, or the reading of the man who in a general way wants to improve himself. Fiction, which supplies 75 per cent of the circulation of the modern town or city library, was not furnished by either the college or the association libraries. For that the readers went to the circulating libraries, which no doubt seemed to the Sir An-

thony Absolutes in this country, as they did in England twenty five years before, an evergreen tree of diabolical knowledge. But the proprietary libraries had been founded by gentlemen desirous of promoting the diffusion of useful knowledge and extending the means of information, and as Duché writes in 1774, "For one person of distinction and fortune there were twenty tradesmen that frequented the library." These men came there to learn. It may be doubted whether women frequented the libraries at all. Amusement, the culture of the imagination, the culture of a love and appreciation of beauty, must have been very much in the background.

The next variety of library to be established was the mercantile, with which are to be joined the young men's associations, mechanics' institutions, and apprentices' libraries. They sprang up in connection with the marked educational movement of the second and third quarters of the century, were designed mainly for young men who could not afford to purchase a share in the joint stock libraries but could pay a small annual fee, and they usually had classes for evening instruction and courses of lectures. They were another step in cheapening knowledge. Like the social libraries, they flourished for a time, and are still useful where they have become solidly established, or in states where the free library system has not yet penetrated, but they are destined to give way in time to their powerful rival.

They had an effect probably not in the least contemplated by their founders. Like all libraries, they were continually in want of money; they obtained it by extending their membership beyond the merchants and clerks of the original plan to any one who would pay the annual fee. To attract the public, it was necessary to provide what the public wanted to read. Going into competition with the circulating library, they adopted its tactics, and the mercantile became as much lighter than the social as the social was lighter than the college library. So was the way prepared for the free public library, both by a lessened cost to readers and by a mitigated austerity in book selection.

The inadequacy of these libraries for any thorough investigation compelled the formation of special libraries—his-

torical, theological, law, medical, scientific, oriental, and society. The century came in with five or six of these, and closed with as many hundred.

The private libraries were intended for the owner and his friends; the college libraries for the professors and their students; the proprietary libraries for the stockholders and their families; the mercantile, at least primarily, for the merchants and their clerks; the other libraries for limited classes. So far there were none for all the people, and none free. But in the northern states all the people were beginning to want reading, and were rapidly becoming willing to tax themselves for it. With the second third of the century began a new era, which the little town of Peterboro, in New Hampshire, had the honor of inaugurating. At the instance of the Unitarian minister, a free library was founded in 1833 by an appropriation that has been continued annually to this day. Thus America became the birthplace of the free library, for the leaders of the movement, which resulted in the library law of 1850 in England, have said that they derived the idea from this country. But the town was in advance of its time. Thirteen years passed before another little town—Orange, in Massachusetts—ventured on the same step; four years later Wayland followed. Neither of these had any right to spend their money so, but their lawlessness was not rebuked, and perhaps contributed to the passage of the acts by which New Hampshire in 1849 and Massachusetts in 1851 authorized any town to tax itself for a free public library.

A Bostonian has expressed his surprise that Boston, a city with traditions of intelligence and education, gave no indications of considering this matter of free libraries till it was over two hundred years old. He might have added that she spent a long time in considering; there were eleven years between the first suggestion and the decisive action in 1852; but when she finally adopted the idea there was no hesitation in carrying it out thoroughly. She has ended by collecting the largest stock, erecting the costliest building, and for the first forty years having the largest circulation of any city in America.

Nor is this all. The library was in the hands of men who

felt that this new creation had in it the potency of all libraries; that it might do the work of all that had preceded it and its own peculiar work besides. In other places some parts of a library's function may have been better developed, but nowhere yet has the happy combination of private and public liberality made it possible to at once so thoroughly suffice for learned research even of the specialist, gratify cultivated curiosity, please the bibliomaniac and the dilettante, foster idle meditation, or stimulate vigorous thinking, while yet not neglecting to meet every want of the general reader, even the want of amusement and illusion, and, more than this, to attract to itself and to train adults who have never been in the habit of reading at all and children who have not yet learned to read with profit. If in any way the library falls short, it has been in this latter work, which western libraries have taken up enthusiastically and pursued most successfully.

Another class of free institutions had its origin a little after the town libraries. In 1835 a law of New York permitted each school district to tax itself \$20 to found and \$10 a year to maintain a free public library. But as the people would not tax themselves, the friends of the measure persuaded the legislature in 1838 to appropriate \$55,000 a year to purchase the books. Fifteen years later the libraries had over 1,600,000 volumes, but they were very little used, except in the cities, and the system was an entire failure. Eleven years later, after half a million more had been spent, there were half a million volumes less. A school district is perhaps too small a territory for a successful library, but the real cause of failure was that among a people who are not eager for it, reading will not take root except by wise management, and the charge of these libraries was in the hands of men who were not interested in them. A library always suffers when ruled by a school board—persons who, if not chosen for political reasons, are selected for their ability to administer an institution which has this only in common with libraries, that it is educational, but otherwise differs entirely in aims, personnel, material, and methods. In this case there was not even the safeguard of a librarian to look after the library's interests. The school trustees were often incompetent to select the books, and ac-

cepted any rubbish that booksellers might offer. Such libraries, of course, did not attract readers. In 1892 New York wisely separated school libraries confined to school use under direction of school authorities from town libraries for public use under direction of trustees.

The century's library history falls into two main periods, the first three quarters and the last quarter. The first was characterized by paucity, poverty, slow increase, slow development of purposes and methods, by conservatism, limitation, and restriction. The latter period shows an astounding increase in number and size, money given in an increasing ratio, library buildings going up all over the land, their suitability to their purpose improving, experiments making in administration, new channels of library influence constantly opening; the collection of books, though no longer considered the main object, going on more rapidly; the use of the books, now regarded as the supreme consideration, daily spreading in all directions. The causes of this luxuriant growth are many. Chief, no doubt, was the increase in population and wealth, which has at the same time led to the foundation of hosts of new libraries and quickened the growth of those planted during the first period. Another cause was the spread of education and culture, furnishing an army of readers, with awakened minds. But it is to the librarians that are due the enlarged ideas of the library's mission and the discovery of the quicker and more effective ways of working which, by doubling the reach and power of libraries, have strengthened their hold upon popular favor and reinforced their appeal for philanthropic support. The change began when a hundred librarians met at Philadelphia during the Centennial exhibition to exchange views and make one another's acquaintance. The librarian of 1876 was busy in his own library, and seldom heard what others were doing. There was little spread of professional ideas and no coöperation. The American Library association, which was the result of the Philadelphia meeting, and the Library Journal, founded at the same time, changed all that and brought improvement into every branch of library economy. A previous convention in 1853, though it promised well, came to nothing. The greater success of the meeting of 1876 was

due in part no doubt to the ripeness of the time, to the elimination of the slavery question, to the greater culture of the nation, but mainly to the efforts of a small group of men who did not allow their interest to die out.

The essays by the leading librarians of 1876, published in a thick volume by the national bureau of education, the papers and discussions at the conferences, and the other matter that fills the 13,000 pages of the *Library Journal*, treat mainly of the five classes of subjects in which there has been the most progress—library establishment, the profession, the building, the management, and the methods of reaching the public.

The trend of opinion is toward libraries established by legislation, supported by taxation, helped as far as possible by private generosity, managed by their own authorities, free to all—the library of the people, by the people, for the people. Such libraries are coming into existence fast. To assist their establishment seventeen state library commissions have been organized, the first in Massachusetts in 1890. They work differently, according to the different needs of the states, but they all aim to fan library zeal where there are libraries, to arouse the desire for them where there are none, to distribute public aid to poor towns, and to encourage private giving everywhere. But legislatures should take one step and oblige towns to have and properly maintain libraries as they already require them to provide schools.

The old writers on library topics were always prone to enlarge upon the qualities needed by the librarian. They would have him in business a hustler, in learning a scholar, in book buying a critic—but a broad minded critic—in memory a Magliabecchi, in languages a Mezzofanti, in tact a Metternich, in administration an organizer and a disciplinarian, in temper an angel, and everywhere an enthusiast, for the librarian who is indifferent is lost. But such prodigies must always have been rare, and even they could not alone have met the demands of a modern library. He needs assistants. It was early seen by the association that the best work could be done only by specially educated persons; that librarians were constantly losing time in training new assistants; that libraries were continually checked in their progress while librarians without

experience were learning their trade, and that many were condemned to stagnation because the new librarian simply plodded on with more or less stumbling in the footsteps of his predecessors. The solution first suggested was apprenticeship; the next, more radical and more efficient, was a library school, corresponding in thoroughness to the schools that fit men to be doctors, lawyers, and ministers. There are now four such schools, whose graduates are eagerly absorbed by libraries, to say nothing of the summer schools, which give those who can not afford a full course such a smattering of library knowledge as can be acquired in six weeks. Besides this, a number of large libraries take apprentices, from whom their staff is recruited or the neighboring small libraries are supplied.

As a natural result a change has come about in the appointment of librarians. Formerly it was too often the man who had failed in the pulpit, the court, the schoolroom, or even the shop, who got the votes of compassionate committees. It is an advance that these votes are often given now to men who have succeeded in some such occupation, with the idea that they will therefore succeed in a library. Nor are these appointments always unfortunate; after all, ability is the main thing; yet they leave something to desire, for though it is true that a man may guide himself by the practice of his predecessors, yet the greatest success does not rise from following precedent, but from knowing when rules can be disregarded and when they can not—a knowledge that comes only from a thorough acquaintance with the subject matter. The next step will be for all appointing bodies to require, as many do now, both ability and experience.

Architecture has lagged behind other branches of library practice, partly because the needs of a library have been expanding so fast, partly because libraries have been designed not so much for use by men who had used them and had learned their defects as for show by committees and builders. Bad ventilation is common, bad lighting universal; one hears of libraries without class rooms for the public or working rooms for the staff; they are continually made with no provision for enlargement, though nothing grows more surely than a libra-

ry's stock of books and number of readers. Some have been built too small even for the books that the library had already. Even for show they have not till very lately reached much success. We have not even found a characteristic style of architecture. Every one knows a church, a theater, a railroad station, when he sees it. One seldom knows a library if it is not labeled. The ordinary library building might be taken for a school, a bank, a courthouse, or a municipal building. Yet the way to a style was plain. A library has one need which should give rise to distinctive features. Its reading rooms, its study, and its working rooms must be very light—much lighter than the rooms of a dwelling house. This necessity ought to show in the design. The stack must not only be light, but must be lighted in a peculiar way, which alone would mark the building as a library, by a series of lofty, narrow windows, separated by still narrower columns or sections of wall, a difficult matter to treat without bareness and monotony, yet surely not beyond the capacity of the American architect.

The library building of 1801 was in most cases one room, shelved around the walls. When too many books accumulated for the wall space, they were put into cases projecting from the sides. The evolution of a century has differentiated this single cell into a score of different parts, each with its own function—for work, the packing, accessioning, cataloguing and classifying, binding, printing, mechanics' rooms; for the personnel, the trustees', librarian's, staff's, janitor's rooms; for the public, the cloak and hat, toilet, charging, reading, current periodical reading, and standard reading rooms, and sometimes the dining room; for special kinds of stock, the rooms for bound periodicals, manuscripts, maps, patents, public documents; for special classes of users, the study, class, lecture, art rooms, the photographing room (with a developing closet), the music room (with a piano and deadened walls), the room for the blind, and the children's room. All of these are needed in the largest libraries; many of them are already to be found in them; the children's room is needed everywhere. In the smaller libraries, of course, one room plays many parts.

In the first years of the library awakening the most attention was paid, as was natural, to details of management—the

length of shelves, the form of the accession book and the binder's schedules, the size of cards and their ruling, to questions of movable or fixed shelves, movable or fixed location, stamping or embossing title pages; in fact, the things which are now taught in the library schools—the a, b, c of the profession. This excited some ridicule, as also was natural. It was called pedantic; people said that too much time was spent in distinguishing tweedledum from tweedledee; that the loss of originality was too high a price to pay for a doubtfully desirable uniformity; that in absorption in mechanical details the things of the spirit would be forgotten. They were right and they were wrong. It was necessary that these questions should be settled before attacking the deeper problems. One must forge one's weapons before one goes into the fight. It is best to be thoroughly familiar with one's tools before one undertakes complicated work. Both dangers that were feared are real, but against them stand American inventiveness, which will not be made to halt at any one stage of achievement, and the missionary spirit, which can never be content with mechanics, but must be saving souls—in the library way. The leaders had no fears, and they were justified. In the last half of the last quarter of the century, great as was the library progress in every thing else, the progress in ways of reaching the public was even greater. Go into a modern library, and see the steady stream of books flowing into the hands of every class in the city, their time of waiting reduced to a minimum; see hung up near the delivery desk lists of the best new books, made attractive by pictures and instructive by criticism; at the information desk watch the versatile clerk answering a constant succession of questions about the most diverse subjects, telling one where to look, rescuing another from a fruitless search, explaining the reference books, directing to the shelves, guiding the reading; see in convenient nooks the portraits of authors whose birthday is at hand, hung over tables covered by their writings and the works about them, or look at other tables spread with the best that the library has on approaching anniversaries, Christmas, Halloween, the discovery of America, at once showing the resources of the library, and suggesting to frequenters to read for some better object

than entertainment or novelty; go into the children's room, mark their satisfaction as they cluster round the shelves and discuss their favorite books, or sit absorbed, the older ones in magazines, the younger in picture books; see their friend the attendant helping them, or rather showing them how to help themselves, now and then putting in a word about their choice of books, but obtruding nothing; in a class room see a school teacher showing her scholars the books that illustrate their lessons; go into the exhibition room and see the lines of photographs illustrating some great painter, or the architecture and art galleries of some famous city, the dwellings and peasantry of some unknown country, the peaks and glaciers of a great range of mountains; hear in one room a man reading to the blind, in another a musician trying music, in a third see a photographer reproducing manuscript documents; here a clerk is dispatching books borrowed by a distant library for one of its clients, there another is choosing books which are sent once or twice a week to a delivery in an outlying village; an intelligent assistant will go with them and, knowing all the borrowers, will recommend to each the book which will suit him best, gently leading him to better reading—a sort of pastoral care that it is not easy to give in the rush of the crowded central delivery room; note that this goes on ten or twelve hours every day in the year; that it is free to all; that if formerly libraries were for the learned, now it is certainly to the ignorant that the gospel of learning is given; and then say whether the public library is failing in its duty to the community.

From time to time some one is alarmed at the extension of library activity and cries "*panem et circenses.*" But the circenses, which being interpreted is novels, are so inextricably bound up with the educational work of the library, being the inducement to many to come and be taught, and they are as now written so largely educational themselves, that their supply will stand or fall with the libraries. For the panem, the solid work of the library, whose paying for out of the public pocket seems to certain theorists of dangerous tendency, only justified on socialistic grounds, the extremest individualist admits the necessity of combining for the public defense, and it

is abundantly clear that general ignorance menaces an attack not merely on the republic but on civilization. Moreover, it is the Anglo-Saxon way—and we are still largely Anglo-Saxon—to make theories after trying experiments. We are at present thoroughly committed to the experiment of universal education. We are hoping to find that it not only imparts information and sharpens intellects, but counteracts temptations and lessens crime, increases the earning power of the individual and the effective force of the nation. Few things can be made certain in sociology, but if after a time the prophylactic power of education appears probable, the existence of libraries is justified, for there is no doubt that they are educative. They take up the work where the schools are compelled to lay it down for the majority of the community, and they carry it on through life; they are doing this with greater and greater effect as the schools succeed more and more fully in giving to their pupils their best gift—the power of self education.

THE ADULTERATION OF FOOD AND MEDICINE.

BY HAMILTON P. DUFFIELD.

[Hamilton P. Duffield, surgeon of the Iowa soldier's home, has been a close student of charities in both theory and practice, and has taken a specially active part in devising means for making comfortable those who have served in the armies and navies of the United States and who are now dependent upon the bounty of a grateful government for their livelihood. During recent years he has been connected with the Iowa soldier's home, but has found time to write on his favorite subjects.]

The Mosaic code, given thirteen hundred years before the Christian era, has been the precedent and pattern of all sanitary laws made in the interim between that time and this; and as the lime light of the twentieth century civilization falls upon it, it is seen to transcend all others, in restricting acts, that are not for man's physical well being. Moses' claim that these laws were inspired by Jehovah, and that penalty followed their violation, has been verified for hundreds of years, while man-made laws, and abuses without laws have kept step in the march of civilization.

The Jew's care in the slaughter of animals and fowls is proverbial, and the Gentile is fortunate who can be his customer. The Justinian law, enacted through the influence of pious Jews in the sixth century, had sanitary as well as moral regulations.

The mental and physical health of the people is a necessary element in the success and stability of a nation; and as the mental health is so dependent on the bodily health, we find of late the needs of the physical man making a paramount issue in government legislation. The first pure food law was perhaps enacted in Spain in 1283, and was against adulteration of food and delicacies, the sale of poisons and love potions, infection of the air by putrefying animal matters and so forth. In 1487, and also ten years later, ordinances were promulgated in Germany against the improvement of wine by sugar of lead; in later times beer was in a way supervised, although mainly under control of the guilds. Medical ordinances in cities are spoken of, one in Nuremburg in 1518 regarding the sale of food and adulteration of wine; the latter seems from very ancient times to have been doctored.

The law of compensation observed in nature we also find operative in national crises. The existing law against importing adulterated drugs, passed in 1848, was enacted after an investigation of gross frauds in worthless drugs, which the surgeons claimed were ineffectual to cope with diseases brought on by the Mexican climate, and thus hundreds were sacrificed to foreign greed aided and abetted by guilty importers. The strenuous individual whose fearless statements started the embalmed beef investigation, did as much toward saving the lives and health of his fellow countrymen, by the agitation then begun, as an army of physicians. The publicity given the canners' frauds led to the arousal of a sentiment that will eventually crystallize in a national pure food law, that will enable rigid state laws to be made effective through control of interstate commerce. This resulted primarily from the Spanish-American war, whose cost in life and health will thus be compensated, by the saving of the same to posterity, if it does not benefit all our contemporaries.

Through agitation consequent upon the loss of life from disease of our army in Mexico during the Mexican war, a committee of physicians was appointed to investigate abuses in the drug importation from foreign countries. The difference in dosage of certain drugs was investigated; sometimes fifteen or twenty times as large a dose was given in the western and southern states as in eastern localities. The result brought out the fact that there were pure drugs for eastern physicians, and inferior adulterated and sometimes worthless drugs, sent out for the western and southern states, and to sell by contract to the army. Europe at that time had stringent laws regulating the sale and dispensing of drugs, so the United States was a convenient and profitable dumping ground for these inferior goods.

The college of pharmacy of New York had for years protested against misnamed and sophisticated chemical preparations as imported, as being detrimental to the custom house, and to the health of the people. The Philadelphia college of pharmacy was founded for the purpose of exposing these frauds. Seven hundred pounds of rhubarb, practically worthless, passed the custom house invoiced at five cents per

pound, while East India costs forty five, and Russian two dollars and fifty cents per pound.

Dr. J. M. Bailey was made examiner of drugs at the port of New York in 1846, and he testified before the committee, that more than one and a half million dollars' worth of drugs passed through that custom house annually, and more than one half were adulterated or deteriorated. Accepted contracts made by the bureau of medicine and surgery were taken to show evidence of adulteration and fraud, and to demonstrate the need of legislation. Peruvian bark, not powdered, contract price per pound fifty cents, market price seventy cents. Peruvian bark in powder per pound, price twenty five cents, market price seventy five cents. Eleterium, contract price per pound one dollar, market price, three dollars and fifty cents. Rhubarb, pulverized, contract price per pound seventy five cents, market price, one dollar and twenty five cents. A few more were added, and given only as samples of the accepted contracts. The report of the committee led to the enactment of the law without debate.

The following argument is quoted from the report of the committee: "The laws punish the use of the dagger, yet nothing protects the community from violence not less fatal, but better concealed under the popular name of trade. If a man write another's name, or pass a counterfeit bill, the prison is his doom; if he stop the mail on the highway, and thereby endanger life, he may be executed." To pass a counterfeit bill is a crime, but to pass a counterfeit medicine is not. Trade and correspondence are more valuable than life, because especial laws are passed for their protection. To state the argument is to refute it. Destitution and want may drive a man to seize upon that which is his neighbor's, and we might in pity overlook the crime, or cover it with the mantle of charity; but the cold blooded, deliberate, studied, and fatal deception practiced in articles designed for the relief of suffering and disease, can admit of no palliation—can find no excuse."

The investigation resulting from the Spanish-American war crystallized public sentiment, and pure food laws were enacted in several states, some mildly restrictive, but others, as in Indiana, Washington, Illinois, California, and South

Dakota, of real efficiency. Without doubt the universal press agitation met the general demand for it, and was the controlling force that induced the senate in 1899 to appoint a committee to investigate food products, as for fifteen years food bills have been up for passage in the senate.

In April, 1904, in a speech on the bill pending, Mr. Heyburn said: "Although twenty one or twenty two pure food bills have been before the senate, this is the first time any one of these measures has been discussed on the floor of the senate, under any circumstances." (As the senate really passed a bill which originated with the grange and which did not pass the house, it must have passed without discussion.)

The senate investigation committee was appointed after the adoption of the following resolution: "Whereas it has been for years publicly charged that in the manufacture of articles of food and drink many manufacturers of the United States who transport their goods from one state to another, do most grossly adulterate such products, to the serious detriment of the public health and to the defrauding of purchasers: Therefore, resolved, that the committee on manufactures of the senate is hereby authorized and directed to investigate and ascertain what, if any, manufacturers are adulterating food and drink products, and which, if any, of said products are frauds upon the purchasers."

Senator Mason of Illinois was chairman of the committee. Several food manufacturers and chemists of national fame testified before this committee in different cities of the United States. The most important evidence was given by Dr. Wiley who for many years has been chief chemist of the agricultural department of the United States. He said that nearly every kind of food in the market had been at some time adulterated, or mis-branded, rendering it either harmful or fraudulent. It was said that Davenport, Iowa, and other localities where maples did not grow, made Vermont maple syrup, made it too of cheap yellow sugar and vegetable extracts, sometimes extract of hickory bark. Dr. Wiley testified that he had had occasion to make a careful examination of almost every variety of food that had ever been upon our markets for sale, also drinks, because you include in foods all the beverages and con-

diments which are used. He found adulterated milk the commonest fraud, and that boric acid and formaldehyde were used in milk as preservatives. In butter mixtures, cotton seed oil and beef fat, and sometimes pork fat, all sold for pure butter; this before the oleomargarine act compelling proper labeling of such packages. Said that more than half the strained honey on the market was adulterated—jars of glucose, on which floated pieces of honeycomb.

This senate committee said that in their investigation, they felt that many times they had not been able to get at the exact truth; said they owed much to the services of Dr. Wiley, for his marked ability, and unselfish enthusiasm, and if people could see the horrible stuff sold to the poor, who must buy in the cheapest markets, the poisons that go into cheap soda water, the cheap poisonous stuffs sold for fruit jams and jellies, in poor quarters, the thousands of frauds practiced in the sale of foods upon the ignorant, poor, and sick, and upon the children of the country, the committee felt that all honest people would share Dr. Wiley's enthusiasm.

Notwithstanding the fact that most condensed milk from the large factories of our country is pure and wholesome, made under good sanitary conditions, these factories, to protect themselves from dishonest competition, have to spend much time and money fighting an unwholesome product. The sugar of the country at present is generally pure, but it would be safer to have a law holding the trust to the present standard. In syrups the committee found four grades branded maple syrup, containing from twenty to eighty per cent of glucose. In extracts they found great frauds, and noted that only one manufacturer (which the evidence shows was Dr. Price of Chicago) invited them to go through his factory from top to bottom—this visit and subsequent analysis, showed that he had nothing to conceal. In examining baking powder, it was the avowed purpose to determine whether the fruit acid from the grape, cream of tartar, or the mineral acid from alum, was least harmful. While not broadly stated as the result of the report, the investigation and analysis showed the purity of both the Royal and Price's baking powders, and that they were made by the use of pure cream of tartar and soda; the

committee recommended that the use of alum in baking powders be prohibited by law.

The committee visited ninety two breweries and bought four hundred samples. They found salicylic acid most often in imported beers, and American beers for export. They found candy much adulterated and colored with aniline dyes, sometimes with terra alba and glucose constituents. Carbonated still wine sold for champagne. Peanut and cocoa nut shells in spices, it was found, made the ground spices cheaper than the whole, as the mixture paid for the grinding, and left a handsome profit. The evidence of the government chemist showed almost every sample of cream of tartar, purchased either at the drug or grocery stores, to be fraudulent, only one having a trace of it. This stuff is known by the cecalistic letters C. T. S. which to the initiated means cream of tartar substitute. This substitute is alum, and many housekeepers, to be on the safe side, make their own baking powder, with this fraudulent cream of tartar and common soda. The sale of the dried and imperfect berries of coffee (which do not have the taste of coffee) is prohibited in Germany, so they are screened, and sent to America by the ton, as black jack, and we have this thrice imported coffee in our breakfast beverage, with sufficient chicory to enrich it.

Dr. Wiley found lard was adulterated with vegetable oils, or fats, under the name of refined lard, cotton seed oil being used as an ingredient. Concerning olive oil, he states that hundreds of barrels of cotton seed oil go to France and Italy yearly, for the purpose of being refined, and that it is returned to us as olive oil, containing only a mixture of olive oil. His evidence showed that ground mustard was chiefly flour and turmeric for coloring. Coffee, ground and unground, roasted and unroasted, was found adulterated with various substances. Molasses and flour is moulded and colored, to suit the purpose of mixing with green or roasted berries; sometimes twenty five per cent of artificial berries are found per pound. He said that ground coffee was often two thirds chicory. Coffee selling at forty cents per pound and chicory at about eight cents. Said that fillers were manufactured in large quantities, and in colors suitable for mixing with pepper, cinnamon, and

allspice, etc.; these fillers were ground shells of nuts, or colored flour, and a filler for cream of tartar consisted of infusorial earth.

In the making of beer, instead of malt, barley, glucose, rice, and hominy grits were used, generally, because they were cheaper. Some malt was used, but sometimes sixty or seventy per cent of other things were substituted. At glucose factories there is an oil extracted from the germ of the grain, that is cheaper than linseed oil, and is largely used as an adulterant of that oil. Cider, alcohol, and malt vinegars all sold for pure cider vinegar. In the investigation conducted by the aforesaid committee, adulterations were revealed that came under two classes: those simply fraudulent, and those fraudulent and deleterious to health. Dr. Wiley, Professor Mitchell, of Wisconsin, and others testified that butter was sold, from which the milk fats had been subtracted, and vegetable and animal fats substituted. Some testimony was given as to milk and butter being preserved by freezene (a solution of formaldehyde).

Under the class rated as simply fraudulent, we find oleomargarine, sold as butter, honey, adulterated with glucose, exhausted tea leaves, with willow leaf mixture, strawberry jam, made of glucose and timothy seed, buckwheat flour, made of rye and other cheap cereals, currant jelly, made of apple cores and parings, mustard seventy per cent starch, colored with turmeric. Pennsylvania statistics issued in May, 1900, showed that eighty seven million, eight hundred thousand pounds of oleomargarine was sold in a year, in the United States. It costs seven cents per pound to make, and thirty three states prohibited by law its sale as butter; but it was sold as butter, at butter prices, thus robbing the people of several million dollars. The oleomargarine, not being deleterious, should furnish the poor a good substitute for butter, at the poor man's price. Victor Vaughan, of the University of Michigan, in the Popular Science Monthly, says that the jellies of commerce are made of apples, boiled with a preparation of tartarine, consisting of either dilute hydrochloric or sulphuric acid, then flavored.

John Bennett, dairy and food commissioner of Michigan, calculated that food adulteration reached fifteen per cent of

that sold in the United States. Vaughan, to be conservative, places it at ten per cent. As the annual food supply amounts to four billion five hundred million dollars, we pay four hundred and fifty million dollars for fraudulent products. As a result of the enforcement of Michigan's excellent pure food laws, Inspector Bennett says, there has been at least seventy five per cent improvement; and that more than sixteen million dollars is annually saved at an expense of only twenty thousand dollars per year. Vaughan says, "When the flesh of diseased animals and substances which have undergone putrefactive decomposition, can be doctored up, and preserved by the addition of such agents as formaldehyde, it is time to demand restrictive measures."

Many analyses have been made in recent years, and some of the published results are satisfactory, others tend to make us doubt the dealers: as when eleven out of forty five samples of coffee are impure, forty six out of forty nine jams; when out of five hundred and seventy four samples, forty one and a half per cent are adulterated. Judas betrays his Lord at the communion table, even now, when for the unfermented wine, he gives a weak solution of salicylic acid, flavored with grape juice. Flour, butter, and cheese are the products protected by government, and it is only a short time since there were more than eleven states having effective food laws, and a few more had some statutes not well enforced.

Dr. Wiley, in *Leslie's Weekly*, writing on the action of preservatives, says that: "While as poisons in food, they are not powerful enough to produce death, they act on the organs of the body, gradually reducing their vitality, and finally endangering the health of the subject." Dr. Carl Kleineberger, of Germany, found that even small doses of salicylates gave rise to the urinary phenomena of nephritis, and also desquamative catarrh of the entire urinary tract. A long continued course of treatment for rheumatic trouble with salicylic acid, or salicylate of soda, will convince any observant physician that it impairs digestion, and causes derangement of the kidneys, unless quite an interim is given between periods of dosage, for the stomach and kidneys to resume their normal functions, showing that daily rations of salicylic acid are not desirable.

The use of preservatives has reasonable advocates among physicians and chemists. Victor Vaughan advocates the use of borax, in such quantities as specified by the English commission: as the dusting of the surface of the hams and bacon to be transported long distances with one and one half per cent of the weight of the meat, with borax, or boric acid; as meat thus dusted does not become slimy. Much of this can be obliterated from solid food, by washing and soaking in clear water, and gives the minimum of evil, when contrasted with the danger of putrefaction. Where people are limited to long distance supplies, preservatives are admissible, but in most instances, they are inexcusable, and rest under the ban of suspicion. The New Hampshire state board of health made a crusade against the use of boric acid in tubs of oysters: its liberal use enabled the dealer to keep these bivalves on his counter, in warm weather, without ice. When the dealers informed the wholesalers, that they were not allowed to sell oysters so treated, the practice was abandoned, without any of them going out of the oyster trade.

Of all the fraudulent adulterations of drugs, the patent medicine ranks first. Edward Bok did more for suffering humanity through his expose of patent medicine frauds, in the *Ladies' Home Journal*, than physicians can through medical journals, for the people using the nostrums are reached by Bok's journal. By giving the analyses of thirty six medicines, showing their per cent of alcohol, he no doubt shocked many good temperance women, addicted to their use. *Harper's Weekly* says: "The patent medicine is strongly intrenched in the affections of the newspaper." One paper owns to an income of forty thousand dollars per annum from this source. Many foreign countries control and regulate the sale of these medicines. Germany has passed strict laws, but has not yet entire control of the sale. Sweden controls by regulating the number of druggists, as there are only three hundred and fifty in the country. In Stockholm there is one druggist to fifteen thousand people, so that there is no need for the patent side in the apothecary shop. The law in Ohio fixes the standard for most foods and medicines: the enforcement of the law, by convictions and fines of violators, has given adulterators of

the life and health giving forces a needed lesson. From 1897 to 1903, inclusive, nine thousand one hundred and seventeen samples of foods, drugs, and beverages were analyzed, of which five thousand six hundred and three were pure, and three thousand four hundred and seventy four were adulterated.

At least seventy five per cent of all the food stuffs imported, come through the port of New York. Enabled by a government appropriation to prosecute the work, the department of agriculture, a few years ago, began a crusade against fraud in imported foods and drugs. They found that about one half of the importations were adulterated, in some form. By some it is claimed that at the present time, it is reduced to about five per cent. Cheap wines, from one section, were labeled as coming from other vintages, whose brand had a higher commercial value. The government can remove these labels, but they can be replaced, after entering into the American trade, unless another strong hand intervenes between middle men and consumer. This is true of most other imports, but it is a great step to have the pure article landed at the seaboard. In January, 1902, Dr. Ernest Lederle was appointed commissioner of health, under Mayor Seth Low. The health department kept pace with others during this reform administration. The total amount of injurious food condemned in 1892 was twelve million two hundred and ninety three thousand seven hundred and sixty one pounds. Nineteen thousand one hundred and eighteen dollars was collected in fines for violations of the sanitary code, as against six thousand two hundred and ninety two dollars, the previous year, and fifty two per cent of the milk was found adulterated. Of three hundred and fifteen samples of one drug, phenacetin, only fifty eight were pure. It was principally adulterated with acetanilid, worth only one fourth as much. As the remedy is often taken without a physician's prescription, no heart depressant should be used as an admixture. In 1904 in New York city, out of eight hundred and seventy one samples of drugs, three hundred and ten were either impure or substitutes; throughout the state, nine hundred and seventy six drug samples were taken, and analysis showed four hundred and fifteen below the standard. Penn-

sylvania has been active in the enforcement of her pure food law with results comparable to those reached elsewhere.

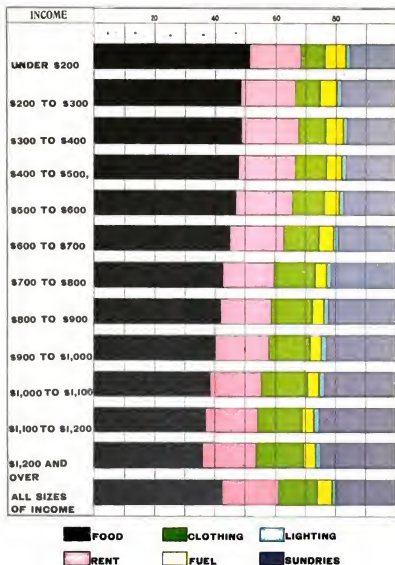
While the astute Yankee no longer has recourse to wooden nutmeg frauds, his fellow countrymen, in all sections, have found more scientific, fraudulent, and vastly more lucrative occupations. The New Hampshire state board of health has published a bulletin, giving analyses of fifteen brands of diabetes flour, purporting to be made of gluten. The bulletin shows there is no pure gluten flour to be had: and the exorbitant price charged was about the only thing in which it differed from common flour. Most of the vanilla extract now sold is said to be made from coal tar. At the St. Louis fair, in the agricultural building, might have been seen exhibits of the state food and dairy commission of Minnesota, and those of the Massachusetts board of health, showing the use of aniline dyes, as used in foods and beverages. A handsome collection of cloths was exhibited, which had been colored with soda fountain syrups, tomato catsup, and other foods. These poisonous dyes are another reprehensible feature of adulteration.

In a milk crusade in Pennsylvania in 1903 only one town, Milton, failed to reveal a violation of the dairy laws. The New Jersey report of the chemical department, in 1903, showed forty and eight tenths per cent of food adulteration, seventy per cent of drugs, twenty nine and one tenth per cent miscellaneous. The agricultural station of New Haven published its report for 1902, from which is gleaned the following: Of ninety four samples of catsup, eighty four per cent were colored with coal tar dyes, and had chemical preservatives. Only one fourth of the vanilla was pure, one eighth of the lemon extract, nineteen per cent of jellies and jams. In 1903 in Massachusetts, from an analysis of over six thousand samples of milk, twenty eight per cent were adulterated; other food articles had eighteen per cent of impurities. In 1902 a pure food crusade was inaugurated, by swearing out warrants against the Kansas city beef company, and others, the result of an analysis of canned meats, showing sulphurous acid and boric acid.

About eighty per cent of all the whisky sold in the United

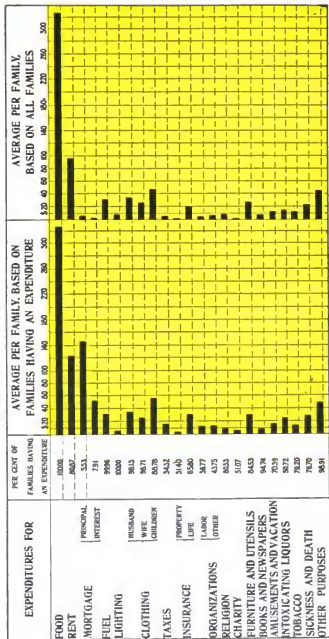


PER CENT OF TOTAL EXPENDITURE MADE FOR VARIOUS PURPOSES IN NORMAL FAMILIES, BY SIZE OF INCOME



AVERAGE EXPENDITURE PER FAMILY FOR VARIOUS PURPOSES

FROM REPORTS OF 2,567 AMERICAN FAMILIES



States is compounded, and while the chemist may not detect the difference in it and that ripened in the natural way, the stomach is a sure detective, and does not tolerate the fraud without protest. Fifteen year old whisky can be made in eighty minutes, by this way of compounding. Brandy is made in the same way, and many wines are innocent of grape juice. The law should compel proper labeling of all liquors. Many manufacturers are putting on the market, goods of prime quality, while others sacrifice every thing for greed of gain. One of the most dangerous adulterants is wood alcohol, and unless you know the manufacturer, a test would be a safe precaution: as it enters largely into all liquid medicines containing alcohol made by dishonest firms; such as essence of ginger, lemon, peppermint, witchhazel, and bay rum. At the instance of the American Medical society, W. A. Buller and Casy Wood, of New York, made a study of wood alcohol, and report a hundred and fifty three cases of blindness, and a hundred and twenty two deaths, from wood alcohol and remedies prepared from it.

Although the United States Pharmacopeia is the standard of the country, it is not a compulsory document, except it is made so by state enactment, hence we sometimes find a difference of seventy or eighty per cent in the product of a drug as made by different manufacturers. Tinctures, fluid extracts, and so forth should be identical, within reasonable limits. Chemicals are often adulterated or impure, and chemical reagents marked C. P. in many cases can not be relied on. Tinctures have been found practically inert. A few years ago, a joint committee from the American Medical society and the American Pharmaceutical association, was appointed, to form some plan whereby pure and reliable drugs and chemicals could be produced, of definite strength and uniform action, to be used as remedial agents. In their report, they deplored the condition, but no practical plan was given as a remedy. Through greater facilities for purchase of the crude drug, a better understanding of what is necessary in its care and manipulation, one firm will produce a better and more reliable product of a certain kind of drug, than other firms. The same firm may fail to make the best brand of another drug. So it

happens that physicians indicate their preference, by placing the initials of the manufacturer on their prescriptions. If another make of poorer quality is used in compounding the medicine, the druggist is guilty of adulteration by substitution. As the pure food and drug bill was killed in the senate, March 3, 1905, by substitution of another bill, the same fraud in filling prescriptions will for a time continue.

CORRUPTION IN PUBLIC LIFE.

BY CHARLES J. BONAPARTE.

[Charles Jerome Bonaparte, secretary of the navy; born Baltimore, Md., June 9, 1851; received his early education at a boarding school, and later prepared himself under private tutors for Harvard university, which he entered as a junior, and from which he graduated in 1871; in September, 1874, was admitted to the practice of law in Maryland, in the Circuit court of Howard county; was appointed by President Roosevelt to investigate the Federal post office frauds, and in 1905 secretary of the navy; was also a member of the Board of Indian commissioners.]

Many years ago a story was told of a well known professional politician in this city, now dead, who, on his return from church one Sunday, was met by a newspaper reporter, who remarked to him, in substance: "Mr. A., I do not understand how so regular an attendant at church as you are can be also so great an adept in stuffing ballot boxes, fixing juries and witnesses, and plugging corporations."

"Mr. B.," replied the statesman, "I never mix up politics and religion."

Of late years the American people has shown a disposition sufficiently plain to be widely remarked to act upon a different principle. So many of our citizens are beginning to mix up a good deal of what my late fellow townsman would call religion with what he would call politics, and the resultant of this mixture is so unpalatable and unwholesome to those of his ways of thinking and acting, that a few words as to the real nature, causes and consequences of the phenomenon may be timely and not without interest.

In truth, the mixing up of politics with religion to which my deceased friend referred constitutes one feature of every notable popular movement in progress for some thirty years throughout our country. After the Civil war and the period of reconstruction, the American people found time to take stock. We were reminded by our tax bills that we had a government, a fact our busy, prosperous fathers could more than half forget during the two generations space of steady internal colonization; and, with this reminder, came a growing measure of doubt and anxiety as to the practical merits, in sober truth and not in fourth-of-July oratory, of all branches,

national, state and municipal, of that government under which we lived. As always happens, it proved easier to recognize evils than to discover remedies; and, in the like accord with all human experience, our search for the latter was hampered by the proffer of all sorts of wonderful nostrums, warranted by their respective advocates to usher in a golden age. But, with that plain, hard common sense, that distaste for sound and froth, that craving for facts and distrust of ideas and theories, which have ever been the portion of English speaking folk, the people of our union have finally gained a fairly clear insight into the nature of our ills, and are gradually but steadily learning what medicine will heal them.

The underlying evil in the administration of our public affairs is simply dishonesty. Our public offices are too often held by dishonest men, too often gained by dishonest means, too often used for dishonest ends. Of course, I do not mean that all or a majority or even any large number of our officials take public moneys or fraudulently waste public property or in any way cause penitentiaries to yawn for them. Such incidents are, indeed, much more frequent than they should be, but it may be doubted whether the proportion of downright thieves among the people's servants is larger than among those of private masters. The great bulk of Americans in public employ wish and intend to do their duty, but a grave and mischievous, though very common, confusion of ideas as to what is their duty makes the best of them sometimes fail to do it, and permits the worst often to neglect it with impunity.

The error is rooted in a mistaken and immoral theory as to the nature of the position they hold. In law and morals alike, a public office belongs to the people; its duties are fixed by the people's laws; its salaries are paid with the people's money. In the words of the court of last resort in Maryland: "In this country a public office can not be the property of the incumbent, because it belongs to the sovereign people who created the government. In the declaration of organic principles, prefixed to the instrument creating the government of this state, those holding the most important offices are declared to be the trustees of the public. The same designation necessarily applies to all public functionaries. Therefore every

office created either by the constitution, or by the laws authorized by that instrument, is a public trust created for the public benefit."

While, however, few deny flatly and openly the truth of the doctrine thus laid down, it is practically contradicted every day and in all parts of the union; for seventy five years we have permitted our public offices to be treated as mere loot in a political warfare—not as trusts belonging to the people, but as spoils belonging to the victors.

Moreover, since the pecuniary value of many offices can be largely increased by adopting latitudinarian views as to certain lines of official conduct, an absence of prejudice is soon cultivated against "tips," "sugar," the "plugging" of corporations and other practices with conventional and euphemistic names which cloak such bald terms as extortion and bribery. Three years ago, during a public hearing before the Maryland state senate as to a corrupt practices act, advocated by the Baltimore reform league, on whose behalf I appeared, it was openly stated by one of the most experienced politicians of the state, without dissent from any one, that certain wealthy corporations habitually contributed liberally to the campaign funds of both the leading parties, in return for an implied, if not an express, pledge that they should dictate legislation affecting them in case of the success of either; and the fact that the bill in question made criminal any contribution for a political purpose by a corporation was universally admitted to have been the principal reason for its defeat.

Civil service reform, in fact, applies a caustic to the very ulcer in our politics in the application of morality and common sense to the choice of public servants. The typical American politician as developed by the spoils system of politics, earns his living by holding, when he can get it, a public office, in return for past or expected party works; to get rid of him and his work, we must thoroughly eradicate from our own minds and those of our fellow citizens the absurd and wicked notion that offices are spoils. This must be our first step if we would purify our politics, and so long a step that it will go far to render needless any further steps in the work of purification.

To understand, indeed, how the spirit of christianity or

any thing else can operate to purify our politics, we must first define what we mean by purity and what we mean by politics. Politics is simply a Greek word, naturalized into English, and meaning originally city affairs. It is true that its significance has widened with time and with changes in human society; the ancient Greek knew no country, as we use the term, except or beyond his city; and his name for its affairs means, for an American of to-day those of his state or nation as well. Nevertheless, every man who interests himself actively in the good government of his city, who tries to secure for it a sufficient police force and fire department, well paved streets, judicious regulations for the public health, public buildings in good repair, public schools in good working and, with all, low taxes and a dwindling debt; who does what he can to enforce the law, punish crime and safeguard the order, good morals and prosperity of the community, so far as these are intrusted to public officers—every such man is engaged in politics and is, in the Greek sense of the word, a politician. It is true that when we speak of a politician we do not usually mean such a man, and when we speak of politics, we do not first think of such work. But if we mean by politics the trade of living on the tax payers and getting rich at their cost, it is useless to consider how this occupation can be purified, for it can not be purified at all; one might as well discuss how to purify policy-playing or the green goods business, bunco-steering or the flim-flam game. Politics thus understood can never be pure except as being pure and unadulterated rascality.

Between the good and bad men in politics there is and should be a warfare without truce or quarter; for whoever would now do good in any form to his fellow men finds the degradation of our political life a hindrance in his task. If he would protect the public health, wisely relieve want, train youth, shelter the unfortunate, suppress vice or punish crime, he must deal with the boss and the ring, and, to do his allotted work well, must sooner or later sweep them from his path. He can not, however much he would, let them alone, for they will not, indeed, they can not, let him alone. Could he and those like minded with him attain full success, their power and prosperity were doomed, for they would then have no

victims whereon to prey, no dupes to do their work; by the very law of their being, they are the natural enemies of every one who would lead others to a higher, purer and healthier life. Men like them have made their trade so dangerous, so odious, so noisome, that against it every force in our midst that makes for righteousness must be directed to-morrow, as it should be to-day.

To have a good, popular government we must, first of all, and before all else, have good citizens. Burke's well known words have been often quoted; they have been even quoted more than once by me; but we can not too steadily remember that, as he said, "There never was long a corrupt government of a virtuous people." When we find any self governing community afflicted with misgovernment, we can safely and fairly believe that it does not deserve a better fate. It may indeed wish to be well governed, just as many a drunkard, in his seasons of repentance and headache, wishes he were temperate, just as many a defaulter, as yet undetected, in saner moments wishes he could repay what he has taken, and feel himself once more an honest man. But, as such men do not wish hard enough to keep away, the first, from the bar, the second from the faro table or Wall street, so such a nation, state or city does not wish hard enough for good government to make bad government impossible.

Because we can not expect a perfect government, whether of this country or of any other, unless, and until, the people governed are also perfect, which is not likely to happen, here or elsewhere, in our time, the conclusion is not infrequently drawn that meantime any improvement is hopeless; but this is a grave mistake. No doubt, as there never has been, so there never will be, a perfect government of men by men; but there have been, there are now, much better governments than those we live under in the United States to-day, and I believe that there might be better governments now and here than any which the world has known in this country or any other. The true lesson is that the question of good government in America is essentially a moral and only incidentally a political one; this is indeed true of all governments, but more clearly and emphatically of a popular government than of any other. I

mean by this that what the friends of good government in America (and especially in America of to-day) have to do is much less to devise methods for the efficient and economical administration of public affairs, than to clearly and frequently set forth and constantly and forcibly impress on the attention of their fellow citizens, the true and admitted ends and principles of government and the daily manifest and grievous derelictions of duty on the part of public officers and of the voters.

Our aim is to spare Americans shame at the government of their country; to rescue the noblest work of our polity from its basest hands; to root out national vices which threaten to make us a political Sodom among christian peoples. He who sees such a goal before him can well fight on with calm confidence that any temporary reverse, any individual apostacy, any seeming injustice of public opinion, are but inevitable incidents of so momentous a struggle, but fitting preludes to so glorious a victory.

THE REIGN OF LAW.

BY JOSEPH WINGATE FOLK.

[Joseph Wingate Folk, governor of Missouri; born Brownsville, Tenn., October 28, 1869; after completing public school course in Brownsville, entered Vanderbilt university, where he was graduated from the Law department in 1890; he returned to Brownsville and opened a law office; a year later removed to St. Louis; he entered actively into politics, and first came prominently before the St. Louis public during the street/railroad strike of 1900, when he succeeded in successfully arbitrating the difficulties; was elected circuit attorney of St. Louis in 1900, and in this office won national fame by prosecuting the "boodlers"; was elected governor of Missouri in 1904.]

The idea of the practice of law which makes it a matter of quibbling and pettifogging is a low and perverted one; the highest honor and integrity must mark the calling which deals with the rights and liberties of the people. The lawyer is the medium through which the law reaches the people and that brings the public and the law into relations with each other. The commission is a sacred one, to be zealously guarded and exercised. Jack Cade in King Henry VI proposed to reform England, and cheerfully advocated as the first step that all the lawyers be killed. Such a state of society would hardly be desirable. Wherever there is liberty, there must be law, and wherever there is law, there must be lawyers.

Lawyers are necessary to civil liberty, as civil liberty rests upon law. The lawyer owes a duty to the public which is high and sacred. The license to practice carries with it obligations to society far above those of the layman. By reason of his training and his position he is looked to for guidance and advice and wields an influence for good or evil greater than other men. In the early history of our government, lawyers molded and shaped its destinies; they builded the foundation upon which the superstructure of states rests to-day; they bore the burdens of government, and were the pillars of the young republic. It may well be questioned if the lawyers of to-day, particularly in the large cities, as carefully fulfil their civic obligations as their forefathers. There was a time when the opinion of the upper thousand American lawyers would sooner or later become the opinion of the American people. This was so because they exercised their full duty in public

affairs, regardless of private interests. The wave of commercialism has affected the legal profession along with other callings; and would it now be safe to permit the upper thousand American lawyers to dictate the policies of state? Some of the most brilliant minds in the profession are in the employ of interests antagonistic to the welfare of the people. Legitimate combinations of capital are perhaps a necessary incident of advanced civilization, and to these I do not refer, but to the pirates of the business seas that prey on the people, under the guise of corporate charters, in defiance of laws. Lawful corporations are beneficial to a community, but associations conceived in corruption and born in bribery are inimical to the public good. Legitimate combinations are entitled to fair treatment the same as individuals—to equal and exact justice, no more, no less—but if a corporation can not operate without bribery or surreptitious violations of law, it were better for the people that it be wiped out of existence. In the early days the lawyer sold his learning alone and retained his individuality; and be it said to the credit of the profession, that is the rule now. But many eminent attorneys of highest attainments dispose of not only their talents, but their freedom of thought and action. Instead of these being the bulwarks of liberty and the enforcers of laws, they are chiefly engaged in devising means and schemes for evading the laws; they are the advisers of the Captain Kidds of commerce in avoiding the consequences of laws intended to suppress them. It is no part of a lawyer's business to advise his client how to commit crime nor to become a partner in iniquity. The lawyer who does so ceases to act as such and becomes a co-conspirator. There is no sanctity in such relation, and it lacks every essential professional element. If this were not the exception rather than the rule, it would account for the fact that lawyers seem to have lost their proud position of old as mentors of the public conscience. Business is a good thing, honors are better still, but patriotism excels them all, and without patriotism one is unworthy to be a member of the legal profession. He is a minister of the law that emanates from city, state, and nation, and can no more practice law in the true spirit without patriotism, than can a

divine teach the doctrines of a Christ for whom he has no devotion.

One can not be a good lawyer without being honest. Law and honesty go together, jests to the contrary notwithstanding. Dishonesty will undo a lawyer quicker than it will any one else. They see so much of it in other men they should learn to abhor it. There are fewer lawyers in the penitentiary than any other calling, not excepting ministers of the gospel. This should be a proof of their honesty, but some are unkind enough to say it is merely a tribute to their shrewdness. In a former house of delegates in St. Louis, twenty four out of twenty eight members took bribes right and left. None of them were lawyers. Of the four who did not prostitute themselves, three were lawyers. Under the laws of most of the states, only two classes of men are required to be of good moral character—lawyers and saloon keepers. The laws go further and demand that the saloon keeper, in addition, be a law abiding citizen, while nothing is said about the lawyer in this regard. That is taken for granted. If lawyers do not uphold the laws, it can hardly be expected that others will.

In a monarchy the government is sustained by the power of the crown; in a republic the government rests entirely upon the laws which a majority of the people make for themselves. If all the laws were ignored, anarchy would be the result—there would be no government at all. When any portion of the laws are not enforced, the government is weakened to that extent. Laws that are not observed add just as much to good government as sores do to the human body. Disregard of one law breeds contempt for all laws, and laws to be effective must be respected. There is entirely too little respect for the majesty of the laws in America. This inevitably leads to corruption, which will, if tolerated, eat into and destroy civic life. If a dramshop is allowed to remain open at a time the law demands it be closed, then the gambling laws cannot be consistently enforced; then other offenses denounced by the law must be tolerated, then comes grafting by officials for overlooking these violations, then legislators imbued by the same spirit sell their votes for bribe money, and a reign of corruption follows. The perpetuity of our government depends upon the

manner in which our laws are carried out. Nearly every state has laws on the statute books to which no attention is paid, and they reap the fruits by having all laws broken. I am not an alarmist when I say, if these conditions be tolerated the republic itself will sooner or later fall, by the props of the law on which it rests being weakened and decayed. Americans are accustomed to regard a republican form of government as a natural condition. That government is mortal and can die, is a thought so entirely foreign to our conditions that it is folly in the minds of some to discuss it. A glance at history does not lend encouragement to this cheerful view. Our republic, though the best, is not the first nor the oldest. We have lasted now one hundred and twenty nine years. Venice had a republican form of government for 1,100 years; Carthage, 700 years; Athens, with various intermissions, 900 years; Florence, 300, and Rome, 500 years. These governments have long ago passed from the stage of the world, and some of them are little remembered. If our government were to last three centuries longer and then die, it would go down into history as one of the most splendid and shortest lived among the wrecks with which the shores of time are strewn. What caused the downfall of these governments by the people? The people made laws until the laws became so many the people began to disregard their own laws. The laws of Rome were good; indeed, the Justinian code is said to be the most perfect system of laws ever devised by man, yet Rome rotted and fell, even while this code was in operation. The laws were all right, but the hearts of the people were not right, and the laws were not obeyed. When the laws ceased to reign, the government resting upon that foundation of law commenced to topple over.

The reign of law means the rule of the people, for a majority of the people make the laws. They register their will crystallized in the form of statutes. We need a revival of the rule of the people. Four years ago the law against bribery in all of the states was considered as practically a dead letter. Up to that time, for the fifty years preceding, there had been only about thirty four cases of bribery reported in the books in all the United States. When the prosecutions were commenced in St. Louis, the members of the house of delegates

denounced the bribery law as a blue law and as a dead law, because it had not been enforced before. They argued that members of the house of delegates having been taking bribes from time immemorial, they had acquired a right to do so, and it was just as proper for them to sell their votes as for a merchant to sell his wares. Here was a crime worse than any other, for bribery strikes at the foundation of all law, yet the law denouncing it was not enforced. Men gave bribes and thought nothing of it; men took bribes and boasted of the fact; corrupt men feasted and fattened at the public expense; legislative halls became dens of thieves; laws became merchandise on the market, and all this time the public conscience was asleep. When the revelations came and the people saw how they had been plundered, and realized that a government by bribery was a government by the wealth of the few and not by the people, they saw the offense in all its enormity; and from one end of the land to the other there was a civic awakening.

Now everywhere officials are made to account at the bar of public opinion for all official acts, and those who prostitute their trusts and sell the powers that belong not to them but to the people, are being made to answer for their offenses. And yet, four years ago the bribery law was denounced as a blue law, by those against whom it was sought to be enforced. Every law is a blue law if a man wants to break it. The non-enforcement of the bribery statute might be explained by the difficulty of securing evidence of its violation, though a prosecuting officer working at it seriously, and willing to incur the enmities such an investigation would bring about, can usually lay bare venality of that kind, if it exists. But there are other laws plainly made to please the moral element, and then not enforced, to please the immoral element. The difference between a wide open town and a closed town is that in the former the laws are not enforced, while in the latter the laws are observed. The gambling laws in many places are permitted to be disregarded and the laws regulating dramshops nullified. It has been claimed these laws could not be enforced in large cities, but they are enforced and faithfully observed in the large cities of Missouri. In fact, Missouri, is the most law-

abiding state of the union, and in yielding obedience to law has set an example for other states to follow.

There is in practically all the states, a statute requiring dramshops to close on Sunday and election days. Yet in some states it is openly and flagrantly violated. When one enforces this law because it is the law, the same cry is made about blue laws and dead laws. It is a law in the interest of good government to stop the enormous amount of crime that comes out of the dramshop on Sunday and election days. Those interested in having the law violated set up the specious plea that it is an interference with personal liberty. It is no more an interference with liberty than the law against gambling or other laws in the nature of police regulations which restrict the rights of one man when they interfere with the rights of another. Absolute liberty to do as one pleases would mean barbarism, for there would be no limit to the conduct of an individual except his whims. The liberty of one would be the unrestricted liberty of every other, and perpetual warfare would result as the wants and desires of men come in conflict, and every man would have equal right to take or hold what his strength or cunning could secure to him. Security can come only from fixed rules, which the people, as they become familiar with them, will habitually respect. Restrictions which seem to the individual to be hardships are but the will of the majority of the people operating through legislative acts. Where rights are defined and regulated by laws to which respect and obedience are given, any particular law is deprived of all seeming hardship. If each man were allowed to say what laws are good and what laws are bad, and to ignore laws he considered bad, there would be no laws at all. The dramshop keeper who violates the dramshop law, calls loudly for the enforcement of the law against the man who breaks the larceny statute by robbing his cash drawer. The trust magnate looks with abhorrence upon the burglar, yet thinks he has a right to break the statute against combinations and monopolies. The burglar detests the law breaking of the trusts and thinks they should observe the law, but considers the law against house breaking as an interference with his personal liberty. So it goes; men observe the laws they like and think

they have a right to ignore those they do not like. The only safe rule is that if a law is on the statute books it must be observed. If a law is objectionable it should be repealed, not ignored. We need reform in the administration of the law more than anything else; though perhaps the old Athenian law might be found beneficial, which subjected to fine and imprisonment the person who proposed a law that turned out to be bad or injurious to the public interests. We do not need new laws so much as the enforcement of the laws we have. There has been too much tampering with the laws in an effort to correct wrongs that do not arise from the infirmity of the laws, but rather from the feebleness of their execution. An imperfect law, well administered, is far preferable to a perfect law badly carried out. The law is merely a weapon in the hands of officials, for without officials laws would be as useless as cannon in war without men. Good government depends more upon the men behind the law than on the law itself. No official has the right to violate the oath that he takes to enforce the laws, simply because some people do not want the law enforced. He cannot excuse nonenforcement on the ground that public sentiment is against the law. He does not swear to support public sentiment, he does take an oath to support the law. Public sentiment is a difficult thing to get at. Law-abiding people are quiet, while the lawless are so vociferous as to deceive some as to their number. The only correct way to determine public sentiment is by the expression of the people's will through the law making body. If an official can not obey the mandate of the law, he should resign and give way to some one else who can. What seems public sentiment may be, and often is, the clamor of the lawless who have a selfish interest in violating law. The indifference of good citizens permitted bribery for a long time, but the public conscience was at last aroused to the necessity of stamping it out. This civic indifference has permitted officials to take a solemn oath to carry out the laws on the statute books, and then deliberately to violate that oath. But the time is coming when an active public sentiment will demand that every public official keep his oath inviolate.

There is no greater evil among us than the easy nullifica-

tion of laws by executive officials who have sworn to enforce them. It is not for an executive official to say whether a law is good or bad, but to enforce it as it is. He should not ask, Is it popular? or is it good politics? but is it right? In the end, if he remains steadfast, the right will win. The trouble has been that a privileged class have violated the law with impunity, and escaped its consequences. It is not hard to pursue with all the terrors of the law, the wretch who picks a pocket or steals a loaf of bread; but it is quite another matter when the law is sought to be put against those who have millions behind them, with political influence enough to affect an entire community. When bad men get a bad man in office, they support him in all the evil that he does. Bad citizens are combined; good citizens are divided—that is the chief cause of law breaking. If good citizens would join hands in patriotic endeavor, the lawless could not control anything, for they constitute but a small proportion of the entire population. The effectiveness of law depends entirely upon how it is executed. When the prosecuting officer is attempting to enforce the law against those of power, he may find himself besieged on every side; close political friends may plead; inducements and hopes may be held out for lessened activity; annihilation may be threatened if he proceeds. Pursuing steadily the course that he has mapped out, with the good of the people alone in view, he may find himself hedged in at times by a wall of hostile influences; but now and then looking beyond to that great public that he is serving, a friendly glance or a kindly clasp of an outstretched hand will cheer and encourage him for further effort. He cannot expect the good opinion of those against whom he enforces the law. Their ill will is the best evidence of his sincerity. Every pressure may be brought to bear to swerve him from his conception of honest effort. If once he falters, his usefulness as a public servant is gone. It may be far easier for him to allow some offense to go by unnoticed, but he should rather have the approval of his conscience than the plaudits of those who would profit by his neglect of duty. He should prefer to retire to private life conscious of having done his best, than by failing to do so receive the encomiums of law breakers. If he halts, he will be applauded by those he should prosecute;

if he goes ahead, he will encounter calumnies and attacks; but if he perseveres and remains steadfast, though the way may sometimes seem dark and the task hard, he will be sustained by the hearts and the consciences of the people. Corrupt men support a man for office and expect in return the privilege of licensed law breaking. Officials are elected to enforce the law, and have no more right to permit lawlessness to repay personal obligations than they would have to use the public funds to pay a private debt. When all executive officials are ruled by law, no man could be above the law and the law would reign over all. Such a condition would be the highest form of civilization. Civilization rests upon law, and law upon the citizen. No more important lesson can be brought home than that of individual responsibility for the affairs of state and nation. The indifference of electors is the weakness of a republican form of government. To arouse them to action is a question of supreme importance. Those who would destroy the laws are always active, and work while good citizens sleep; but once the latter are aroused, they are invincible. If the people want a reign of law they can get it, but they must fight for it. There is the same conflict between law and lawlessness as between the true and the false, the right and the wrong, the evil and the good. The people will uphold the laws when they understand the necessity of it, for the vast majority of the people will do right when they know right. There never was a time when unselfish teachers of the public were needed more than now. Lawyers more than any other class should be the teachers of the people. They can do much, if they are true to their calling, to remedy the things that dishonor. As they are ministers of the law, it is their duty to keep the fountains of law pure and undefiled. The person who in private life discharges the civic responsibilities resting upon him, may perform as great a public service as he who faithfully does his duty in public office. Indeed, the public official is a reflection of the private citizen, as the public life of a nation is a reflection of its private life. Lawyers are in a position to wield a powerful influence by tongue and pen for the reign of law, so devoutly hoped for and so earnestly prayed for by all good citizens. The highest obligation of their call-

ing is to their country; their duty is to the public above all. They are the sworn upholders of the law, and as they love freedom and defend weakness, adore the right and hate the wrong, so they should revere the law because it is the law, and thus make their influence known and felt.

GENERAL INDEX

GENERAL INDEX

A

- Abrasive materials, (J. H. Pratt) VI 431
- Grindstones VI 431
- Occurrence of VI 430-1
- Scythe stones VI 434
- Whetstones VI 432
- Abstinence (see drunkenness)
- Academies I 156
- (see also education, colleges,
military and naval academies.)
- Academy, military (see military
academy)
- Academy, naval (see naval academy)
- Accidents (see also factory legis-
lation)
- Actors (see theaters)
- Adams, Cyrus C.
- Resources of United States IV 18
- Adams, Edwin, player I 315
- Adams, John II 13
- Declaration of Independence II 16
- Origin of Independence II 99
- Part of in freeing colonies II 11
- Adams, John Quincy
- Monroe doctrine II 170
- National guard IX 129
- Proposed national observatory . VII 63
- Adams, Samuel
- Part of in freeing colonies II 12
- Adler, Felix
- Education I 268
- Adlum, John
- Catawba wine maker V 270
- Part of in freeing colonies II 11
- Adulteration of food and medicine (H.
P. Duffield) X 288
- Alcoholic beverages X 299
- Baking powders X 292
- Beer X 293-4
- Bill of 1904 X 291
- Dairy products X 294
- Drugs X 290
- Fruit preserves X 294
- Historical X 288
- Imported goods X 297
- Lard X 293
- Mason investigation X 291
- Medicines patent X 296
- Milk crusade of 1903 X 298
- Milk X 292
- Oils X 293
- Pharmacy's protest X 289
- Advertising (A. L. Thomas) I 387
- Whisky X 298
- Agencies introduced I 394
- Agencies' work I 394
- American and European I 388
- American progress, early I 392
- Corporations I 393
- Definition of I 387
- Eighteenth century I 391
- England second in I 392
- L'Estrange's journal I 391
- Foreign investigation of American . I 388
- Free in United States I 393
- French forwardness in I 389
- Magazine specialties I 396
- Mail orders and I 396
- Media, choice of I 397
- Methods in general I 395
- Milton as an advertiser I 390
- Money spent in I 388
- Newspaper, first I 389
- Old, examples of I 390
- Origin and genesis of I 389
- Philosophy of I 398-9
- Publications in Britain and U. S.
number of I 392
- Tax on I 390-1
- Wording important in I 400
- Writers well paid I 395
- Africa
- American machinery in VII 202
- American trade with IV 5-6; 43
- Agassiz, Louis
- American glaciers VII 51
- Agate VI 344
- Agate, moss VI 346
- Agreements, international
- Britain on Lake Erie reef II 225
- China and the powers II 227
- Interoceanic canal II 229
- Jolo, United States territory II 225
- Mexico for arbitration II 219
- Mexico to pursue savages II 219
- Modus vivendi, nature of II 223
- Other than treaties II 216
- Power of commanders to make
agreements in war II 224
- Power of president II 218
- President authorized to make II 218-9
- Protocol in Spanish war II 225
- Spanish claims commission II 222
- Turkey by protocol in 1830 II 226

Agriculture	
Alkali resisting plants	I 424
American, and foreign trade	IV 103
And labor	VIII 248
And population	IV 254
And western population	III 364
American and world's produc- tion compared	III 2
American farmer of to-day (James Wilson)	V 12
American surplus	V 37
American tea	V 412
And the church	V 356
Area and production, statistics of	V 6
Area and values under irriga- tion	V 8
Artificial selection	V 410
Bacteriology and	V 430
Beef industry, (Garfield, J. R.)	V 174
Beet sugar industry, (C. F. Saylor)	V 227
Botanical science, benefits of	V 419
Boards of trade, influence of	V 27
Botany, problems of American, (B. T. Galloway)	V 414
Burbank, Luther, (Hollis W. Field)	V 105, VII 106
Bureaus, farmers'	V 361
California, growth of, in	V 42
Cane sugar, (F. G. Freret)	V 209
Capital, value of fixed	V 41
Cattle-feeding, scientific	V 10
Census of 1850	V 36
Census, eleventh	V 52
Changes in fifty years	V 104
City population, and	V 24
Civil war, and	V 379
Civil war, influence of	V 43
Climate and tree planting	V 10
Clogs in	V 47
Colleges of	V 59
Colleges, congress, and	V 405
Commercial floriculture, (Leroy Thomas)	V 363
Cord wood, age of	V 431
Cotton, future demand for, (J. L. Watkins)	V 135
Cotton lands, expansion of	V 45
Cotton machinery, (D. C. Roper)	V 129
Cotton seed industry, (C. M. Daugherty)	V 115
Cotton seed, appreciation of	V 35
Crop lands, area of	V 6
Crop statistics, total	V 5
Crops on record, first American	V 21
Crop values	III 480
Crops, relative value of	V 12
Crops in pictures, statistics of	V 101
Crops, total value of	V 14
Crops, total value of American	V 8
Crops, variety of American	V 4

Agriculture—Continued.

Cut flowers, profits in	V 339
Dairy products, value of	V 29
Dairying, (Henry E. Alvord)	V 194
Debt of, to science	V 58
Defects in American system	V 65
Department of agriculture (James Wilson)	V 403
Department of, as an influence	V 56
Department of, indifference of farmers to	V 59
Department of, publications of	V 59
Depression of values from '90 to '00	V 45
Earth molten	V 1
Education, influence of	V 26
Education needed	V 421
Education of a farmer	V 406
Electric age of	V 441
Experiment stations	V 61
Experiment stations established	V 414
Exports, consumers of Ameri- can	V 395
Exports, determination of	V 390
Exports, early	III 17
Exports of 1904	V 382
Exports, percentages of	V 391-2
Exports, value and quantities of different	V 391
Exports, value of	V 9
Europe, exhaustion of	V 25
Farm areas in the west	III 364
Farm acreage in various states	V 38
Farm animals, number and value of American	V 9
Farm animals, value of	V 29
Farm animals, value of	V 47
Farm area, increase in from 1850	V 54
Farm lands, causes of decrease of	V 39
Farm lands, center of	V 49
Farm lands, increase of since 1850	V 99
Farm property, value of	V 40
Farm values from 1850	V 52
Farms, acreage of, in 1900	V 99
Farms, average size of	V 37
Farms, increase in number of	V 23
Farms, size of	V 24
Farms, sizes of, by geographical divisions	V 39
Farms, statistics of American	V 8
Farms, value of	V 29
Farmer, growing riches of	V 12
Farmers, character of American	V 55
Farmers, intellectual improve- ment of	V 62
Farmers' institutes	V 369
Farming in 20th century, (E. P. Powell)	V 431

Agriculture—Continued.

Farming, intensive, attracting the city man	V 334
Farming, intensive, business ability	V 335
Farming, intensive, capital for a small start	V 336
Farming, intensive, experience necessary	V 335
Farming, intensive, glass roofs important	V 334
Farming, intensive, inviting fields in	V 336
Farming, intensive, need of diversity on farm	V 333
Federation of rural forces (K. L. Butterfield)	V 354
Federation of social forces, (K. L. Butterfield)	V 355
Fertility variations	V 103
Fertilization, improved	V 33
Fertilization, principles of	V 10
Fertilizers and soil redistribution	V 104
Fifty years of American, (LeGrand Powers)	V 36
Flour milling, influence of	V 44
Flower culture, capital for	V 340
Food products of west	III 365
Foreign competition	V 56
Foreign demand and population	V 54
Foreign demand, effects of	V 56
Forests, U. S. policy on	V 429
Fruits, statistics of American	V 8
Fruits, substitution of domestic for foreign, (W. A. Taylor)	V 236
Future homes	V 437
Future of food supply	V 10
Future of social	V 438
Future problems	V 429
Geological antecedents	V 2
Georgia, banner state	V 374
Government aid	V 27
Government lands	IV 254-5
Governments work	VII 43
Grange, work of the	V 357
Grapes and Raisins, (G. C. Husmann)	V 252
Growth of north central, western, and south central U. S.	V 48
Income, gross from	V 49
Intensive farming, (B. T. Gallo-way)	V 332
Hand labor period, close of	V 46
History, early, in U. S.	V 51
Horse power in	VII 214
Increase of from 1850	V 37
Improvement of American	IV 31
Indian corn, (C. F. Millsbaugh)	V 158
Indians in	V 18
Influence of gold on growth	V 42

Agriculture—Continued.

Influence of irrigation on	IV 256
Influence of slavery on west	III 19
Intellectual trend, evidence of	V 64
Iowa in	III 365
Irrigation and forests	V 409
Irrigation of west	V 343
Kitchen garden demand	V 337
Kitchen garden start, capital for	V 339
Kitchen gardening requisites for	V 338
Labor, wages of	V 100
Land values, early	V 41
American agriculture and free	V 24
Largest farm in the world	V 324
Lien system, southern	V 374
Live stock, early American	V 22
Live stock values by geographical divisions	V 47
Machinery, and	V 25
Machinery and production	V 109
Machinery, appreciation due to	V 47
Machinery, rise of	V 41
Mighty river of wheat, the (Rollin E. Smith)	V 147
Motive power needed	V 435
Negro labor and	V 353
Negroes as farmers	VIII 391
Numbers engaged in	V 100
Nuts, statistics of	V 8
Organization of farmers	V 357
Ostrich industry	V 47
Packing as a food saver	V 33
Packing, influence of	V 33
Per capita consumption acreage, and surplus	V 102
Per cent of production and export	V 101
Periods of American	V 24
Prospective failure of U. S.	V 426
Physician, future, and	V 439
Plant breeding	V 417
Plant life, nature of	V 4
Plant life, water and	V 423
Plant nutrition	V 424
Plant pathology	V 427
Plants, artificial selection of	V 425
Plants, chemical life of	V 416
Plants, diseases of	V 418
Plants for various regions	V 410
Prices and machinery	V 103
Prices, range of staple	V 103
Problems of American botany	V 414
Production and prices, (G. K. Holmes)	V 99
Products, statistics of	V 39
Progress from 1840-50	V 32
Progress independent of farmers	V 54
Pure science, application of	V 420
Railroads and	V 434

Agriculture—Continued.

Railroads and growth of.....	V 44
Railroads, influence of.....	V 25
Refrigerator cars.....	V 45
Rice, (D. C. Roper).....	V 287
Rice, improving.....	V 411
Rise of quick transportation.....	V 42
Roads, 20th century.....	V 436
Seeds.....	V 299
Seeds, handling of.....	V 299
Social agencies.....	V 355
Societies.....	V 26
Societies, growth of farmers'.....	V 62
Soils, nature of.....	V 3
South, changes in the.....	V 55
Southern, (D. D. Wallace).....	V 37
Southern, and education.....	V 385
Southern and New England farmers, early.....	V 20
Southern, condition of.....	V 373
Southern, improvement in.....	V 381
Southern, needs of.....	V 385
Southern farmer, credit of.....	V 387
Southern, statistics of.....	V 379
(Speed, John Gilmer).....	V 106
Starch, (H. W. Wiley).....	V 166
Statistics of agricultural colleges.....	V 60
Steam and.....	V 431
Sugar cane, (F. G. Freret).....	V 209
Surplus, national farm.....	V 389
Surplus, percentage of.....	V 391
Tea culture in U. S.....	V 292
Tea gardens, American (G. R. Clarke).....	V 292
Tobacco, (J. H. Garber).....	V 277
Tobacco, improving.....	V 403
Trend of modern, in U. S.....	V 51
(G. W. Hill).....	V 51
Tropical agriculture and U. S.....	V 422
U. S. an agricultural country.....	V 4
U. S. an agricultural country.....	IV 254
United States, its soils and their products, (H. W. Wiley).....	V 1
Values by geographical divisions 1850-70.....	V 52
Value of product per acre.....	V 102
Values, acreage.....	V 40
Variety of American.....	IV 19
Waste, early American.....	V 24
Weather bureau's work.....	V 390
West, the, reclamation of, (F. H. Newell).....	V 343
Western agriculture and railroads.....	IV 210
Wheat average per acre.....	V 333
Wine, American, (J. H. Garber).....	V 267
(See also dairying).....	
(See also flowers).....	
(See also various cereals, fruits, and other products).....	

Agricultural machinery.....

American, early.....	V 71
Behel, invention of.....	V 91
Binder, Appleby's.....	V 83
Gordon.....	V 92
Heath's.....	V 92
Locke, Sylvanus.....	V 92
McPhitridge.....	V 90
Marsh.....	V 90
Marsh, first.....	V 91
Nesen and Yost's.....	V 90
Osborn.....	V 91
Spaulding's.....	V 92
Cradles, first American.....	V 71
Cutter, Danford's.....	V 96
Haines'.....	V 96
Hazard Knowles'.....	V 96
Hussey's.....	V 81
McCormick's.....	V 82
Wheeler's.....	V 29
Cutters, grass first.....	V 24
Deering, Wm., work of.....	V 91
Dropper, Newcomb's.....	V 87
Evolution of reaping machines, (Merritt F. Miller).....	V 67, 68
French and Hawkins inventions.....	V 73
Harvester, Haines'.....	V 24
Harvester and thresher, com- bined.....	V 24
Harvester, inventing the.....	V 89
History, early.....	V 67
Hoffheim type.....	V 89
Hussey-McCormick contention.....	V 81
Hussey and McCormick inven- tions of.....	V 76
Hussey and McCormick, im- provements on.....	V 84
McCormick's, L. J., enterprises of.....	V 92
Miller, M. F., evolution of reap- ing machines.....	V 67
Mower, Aultman and Miller's.....	V 95
Hussey's.....	V 95
Ketchum's.....	V 95
Kirby's.....	V 98
Mowers, early.....	V 95
Patents, Manny's.....	V 87
Marsh and Johnson.....	V 89
Miller, Lindsay, and McClintock Young.....	V 88
Osborne and Kirby.....	V 88
Osgood, R. T.....	V 87
Purviance's.....	V 86
Whitely.....	V 89
Prices.....	V 103
Production.....	V 109
Rake, Dorsey's.....	V 88
Reaper, Ambler, Enoch.....	V 84
Bell's.....	V 78
Boyes, Joseph.....	V 73
Ogle's.....	V 74
Mann's of 1820.....	V 74
Randall, Abraham.....	V 85

Agricultural machinery—Continued.

- Smith's V 73
 And mower, combined V 88
 Patent, first V 78
 Practical, America birth-
 place of V 78
 Reapers, earlier American V 78
 Reaping machines, first V 73
 Lofft, Capel V 73
 Pitt, William V 73
 Pliny V 72
 Removers, automatic V 85
 Schnelby, Wheeler, and Reed,
 devices of V 86
 Sickles, the early V 72
 (See also cotton machinery)
- Aguinaldo
 Sympathizers with cause of war...II 206
- Aiken, W. M.
 Government architecture.....I 279
- Air brakes.....
 American plant at St. Peters-
 burg.....VII 206
- Air, compressed (see compressed air)
- Air, liquid.....VII 12
- Alabama battleshipIX 301
- Alabama claims.....
 Terms of settlement of.....II 165
- Alaska.....
 Anglo-American treaty on bound-
 ary of.....II 161
 In Behring Sea Fishery dispute...II 92
 Influence of Klondike on ship-
 building.....IV 129
- Albemarle, the.....
 Incident of.....IX 261
- Alcohol.....
 Adulteration and.....X 299
 (See also drunkenness).....
- Alcott, Amos B., author.....I 359
- Alger, George W.....
 Factory legislation.....VIII 46
- Aliens (see labor, trades unions,
 Chinese).....
- Alkalies.....
 Plants which resist.....V 424
- Alliances, foreign.....
 Possible.....II 141
 With Great Britain.....II 142
- Almanac, nautical (see astronomy) ..
- Almonds.....
 Production.....V 249
 The almond beltV 250
- Allis-Chalmers plant.....VII 282-3
- Alsop, Thomas.....
 Sewing machine of.....VII 340
- Alvord, Henry E.....
 Dairying.....V 194
- Alamo, the fall of, (see also war,
 Mexican).....IX 42
- Ambler, Enoch.....
 reaper of.....V 84
- American Academy Political and
 Social Science.....VII 102
- American Academy Political and
 Social Science, Annals.....VII 103
- American good citizenship, (Grover
 Cleveland)II 1
 American citizenship, creed ofII 7
- American idea, triumph of, (A. H.
 Ford).....VII 198
- American Federation of labor.....
 Constitution.....VIII 146
 Growth of, (S. Gompers).....VIII 143
 MembershipVIII 147
 Origin ofVIII 143
- American system of Supreme Courts,
 (Simon E. Baldwin).....II 70
- Ames, of Massachusetts, debate of, on
 representation.....II 48
- Amethyst.....VI 342
 Production of.....VI 343
 (See also corundum)
- Amphitrite, monitor.....IX 293
- Anderson, Cyrus M.....
 U. S. patent laws.....VII 376
- Anderson, Mary.....I 316
- Anesthesia.....VII 427-8
- Ether for.....VII 414
- Anglo-Saxons.....
 As pioneers.....VIII 245
 NonassimilatingI 59
- Annapolis (see naval academy)
- Annapolis (cruiser).....IX 301
- Anthropology.....
 American.....VII 19
- Apples.....
 First AmericanV 21
 First exported fruit.....V 244
- Appleby, John P.....
 Bladder of.....V 93
- Arbitration (industrial).....
 Bargains of labor and capital...VIII 104
 Coal strike of 1902, and.....III 321
 Compulsory.....VIII 107
 Compulsory, (J. P. Archibald).....VIII 118
 Compulsory, (Seth Low).....VIII 110
 Compulsory, and socialismVIII 119
 Compulsory, limits strikesVIII 123
 Compulsory, not neededVIII 119
 Compulsory, labor opposed to...VIII 166
 Compulsory, objection to, (J. P.
 Archibald).....VIII 118
 Compulsory, suggestions forVIII 123
 Definition of.....VIII 114
 Disappearance of individuals...VIII 111
 Effects of.....VIII 96
 Foundry strikes, ofVIII 92
 In New Zealand.....VIII 37-122
 Limits of compulsory.....III 321
 Limitation, (S. Gompers).....VIII 104
 Practical uses of.....VIII 94-5
 Progress of peace.....VIII 121

- Strikes, insignificance of strikes. VIII 120
 Uses of the strike. VIII 105
 Violated by employers. VIII 107
 (See also industrial commission)
- Arbitration, (international)
 Agreement for with Mexico. II 219
 Alaskan boundary, 1828. II 211
 Alaska boundary treaty. II 151
 Altruistic nation. II 148
 American diplomacy, and. II 173
 American proposal for. II 199
 Behring Sea, on, in 1892. II 211
 British treaty of 1897. II 150
 Desirability of. II 30
 Hague convention, terms of. II 220
 Hague monument to. II 150
 International. II 148
 Lawyers' part in Venezuela
 settlement. II 105
 Mexico, with, in 1883. II 211
 Power of president in. II 208
 Spain, with, in 1871. II 210
- Archibald, Jas. P.
 Compulsory arbitration. VIII 118
 Objections to compulsory edu-
 cation. VIII 118
- Architecture (college).
 Advancement in U. S. I 272
 Cause of activity in. I 275
 Columbia university. I 272, 274
 Commercialism and. I 271
 Endowments and. I 271
 European. I 273
 Government expenditures. I 272
 Growth of. I 273
 Growth of necessary. I 275
 Harvard. I 273
 In U. S., (A. D. F. Hamlin). I 271
 Leland Stanford, Jr. I 274
 Military academy. I 272
 National progress and. I 272
 Naval academy. I 272
 Plans of, general. I 273
 Styles in various colleges. I 276
 Trinity C., Hartford. I 274
 University of N. Y. I 274
 Variety of. I 275
 (See also buildings, high)
- Architecture (government).
 (W. M. Alken). I 279
 Appropriation for. I 281
 Buffalo post-office. I 283
 Bureau, origin of. I 280
 Control of. I 279
 Environmental influences. I 284
 Growth and work of. I 280
 Material, how determined. I 283
 Mints. I 283
 Pioneers, determined by. I 282
 Style of. I 281
 University. I 191
 (See also buildings, high)
- Argentina.
 Opposition to reciprocity with. II 248
- Arkansas.
 Territory formed. II 272
- Armenian massacres.
 American duty in. II 139
- Armor plate.
 (C. O'Neill). IX 326
 Armored ships, list of. IX 336
 Armored U. S. ships, first. IX 331
 Atlanta, the structure of. IX 330
 Comparative tests of. IX 332
 Compound. IX 332
 Dunderberg, the, structure of. IX 324
 Harvey plate in Europe. IX 334
 History, early. IX 326
 Harvey plate improved. IX 336
 Harvey plates tested. IX 331
 Harvey's process. IX 333
 Imports of. IX 331
 Ironsides, the new structure
 of. IX 329
 Krupp process. IX 337
 Merrimac, the, structure of. IX 330
 Tennessee, structure of. IX 330
- Armor (see also navy, the).
- Armour, Philip D.
 Genius of. III 66
- Armstrong, Henry E.
 American education. I 125
- Army, the U. S. and its commanders.
 (Nelson A. Miles). IX 1
 Advancement in. IX 109
 American, (Lord Wolseley). IX 161
 American and foreign com-
 pared. IX 162
 American beet in world. IX 163
 Amusements of old soldiers. IX 419
 As social factor, (M. B. Stewart). IX 152
 Chief of staff. IX 111
 Civil war, achievements of in. IX 57
 Civil war, at end of. IX 56
 Civil war, in, (C. A. Partridge). IX 151
 Compulsory service. IX 158
 Commerce and. IV 517
 Continental army, the. IX 16
 Crime in. IX 103
 Crudeness of American fighters. IX 143
 Danger of standing. IX 119
 Democracy and esprit de corps. IX 108
 History of, early. IX 1
 Emergency relief. X 83
 Eminence of American. IX 165
 Enlistment. IX 103
 Eminence of, (J. C. Tutt). IX 160
 General staff of. IX 92
 General staff of, (Elihu Root). IX 109
 Home for soldiers at Dayton. IX 414
 Home for soldiers at Hampton, Va. IX 426

Army—Continued.

- Home for soldiers at Milwaukee.....IX 427
 Home for soldiers at Marion, Ind.....IX 427
 Home for soldiers at Danville, Ill.....IX 428
 Home for soldiers at Santa Monica.....IX 427
 Home for soldiers, expenses of.....IX 413
 Home for soldiers, early history.....IX 412
 In peace.....IX 125
 In the Revolution (J. S. V. Paddock).....IX 13
 Irresponsibility of the soldier.....IX 154
 Lessons of the Spanish war.....IX 90
 Life of the soldier.....IX 155
 Commanders of, list of former.....IX 1
 Methods old and new of training officers.....IX 142
 Military policy of U. S., (Emory Upton).....IX 116
 Nationalizing the militia.....IX 94
 Occupation of old soldiers.....IX 424
 Officers, lack of.....IX 99
 Officers, noncommissioned.....IX 104
 Operation of, under new law.....IX 111
 Pensions, (W. H. Glason).....IX 429
 Philippine marches, difficulties of.....IX 75
 Philippines, in, (L. E. Wright).....IX 74
 Plans for future of.....IX 97
 Politics in.....IX 93, 101
 Present needs of.....IX 91
 President's power.....IX 111
 Profession, as a.....IX 153
 Regular and militia.....IX 117
 Filipinosto, relations of.....IX 77
 Reorganization of 1903.....IX 110
 Reorganization law of 1903.....IX 109
 Reorganization, need of.....IX 96
 Reserves, need of regular.....IX 95
 Resources of U. S.....IX 126
 Ricarto, mutiny of.....IX 77-8
 Salaries of soldiers.....IX 161
 Schools for officers.....IX 144
 Sham battles.....IX 146
 Science, army officers in.....VII 67
 Soldiers' home, national, (E. O. Stevens).....IX 411
 Spanish war, at the beginning of.....IX 86
 Spanish war, before the.....IX 65
 Spanish war, in, (J. E. Stuart).....IX 64
 Spanish war, since the.....IX 85
 Swords, historic (R. I. Geare).....IX 392
 Training of officers, (Eben Swift).....IX 141
 Transportation of.....IX 101
 Volunteers, need of.....IX 93
 "War rides" for training.....IX 149
 Weakness, cause of American.....IX 124
 Workmen in.....IX 97
 (See also guard, national).....
 (Guns, pensions, war, West Point.)

- Arnold, Bion J.....
 Predictions on electric railways.....IV 447
 Arnold, Oswald J.....
 Insurance in practice.....III 452
 Art, American.....
 (F. E. Elwell).....I 331
 And the South.....I 332
 And wealth.....I 343
 Backwardness of.....I 336
 Collections.....I 335
 Critics needed.....I 343
 Daily press hurt to.....I 344
 Development of artist.....I 343
 French influence.....I 333
 Future of.....I 338
 Highest reach of.....I 334
 Houdon's influence.....I 332
 Genius, latent.....I 345
 Monuments.....I 335
 Museums of.....I 334
 Puritan influence.....I 331-2
 Articles of Confederation.....II 58
 Asbestos.....VI 323
 Ashley, W. J.....
 Early American commerce.....IV 65
 Asia.....
 American trade with.....IV 5-6
 And the isthmian canal.....IV 185
 United States and Asiatic powers.....II 138
 Asphaltum.....
 (J. Struthers).....VI 395
 Arkansas.....VI 400
 Bituminous rock.....VI 397
 By-products.....VI 397
 California.....VI 401
 Chemistry of.....VI 396
 Constituents of.....VI 397
 Deposit of, largest.....VI 399
 Deposits, U. S.....VI 402
 Geology of.....VI 398
 Indian territory.....VI 401
 Liquid.....VI 398
 Occurrence of.....VI 398
 Mining of.....VI 399
 Pavements of.....VI 404
 Properties of.....VI 396
 Refining of.....VI 405
 Roofing.....VI 405
 Uses of.....VI 403
 Varnish and cement.....VI 405
 Associations, building and loan.....
 (H. F. DeBower).....X 226
 Banking institutions.....X 228
 Finances of.....X 226
 Members, typical.....X 227
 Membership and value statistics.....X 228
 Methods of.....X 229
 Results of.....X 231
 Weaknesses of.....X 229

- Astronomy**.....
- Achievements of.....VII 68
- American, (E. S. Holden).....VII 58
- American nautical almanac.....VII 77
- And Chicago.....VII 78
- And Smithsonian Institution.....VII 62
- (Bowditch, Nathaniel).....VII 60
- Early American.....VII 70
- Early coast surveys.....VII 73
- Early naval observatory.....VII 72
- Foundations of observatories in
- U. S.....VII 65
- History of.....VII 25
- Hurt by civil war.....VII 75
- National observatory.....VII 63
- New American observatories.....VII 5-6
- Nonutilitarian.....VII 67
- Original work of American.....VII 92
- Progress of in U. S.....VII 72
- Research, American.....I 202
- Some aspects of American, (Simmon Newcomb).....VII 67
- Work at Harvard and Lick observatories.....VII 76
- Work of Bond.....VII 64
- Chandler.....VII 78
- Clarks, the.....VII 5
- Gills.....VII 64
- Langley.....VII 4-5
- Lowell.....VII 5
- Naval officers.....VII 59
- Mitchell.....VII 74
- Mitchell, Maria.....VII 92
- Chandler, Newcomb and Young.....VII 5
- Pelroo.....VII 62
- Asylums** (see blind, the).....
- (See also charities).....
- (See also drunkenness and insanity).....
- Atchison, Topeka & Santa Fe railroad**, (see Santa Fe).....
- Atlanta, ironclad**.....
- Structure of.....IX 330
- Atlantic ocean**.....
- Trade of.....IV 20
- Aultman, Cornelius**.....
- Mower of.....V 98
- Austin, Moses**.....
- Early settler of Texas.....II 278
- Austin, O. P.**.....
- Coal supply.....VI 186
- Coal, world's need of.....VI 186
- Expansion of American commerce.....IV 38
- Territorial expansion.....II 265
- Australia**.....
- American trade with.....IV 5-6
- British and American trade with.....IV 9
- Democratic.....I 4
- Australia—Continued**.....
- Foreign trade of.....II 256
- Government ownership in.....IV 365
- Austria**.....
- Early trusts in.....II 354
- Trusts in.....II 353
- Automobiles, American**.....
- (John Farson).....IV 500
- Cheapness of auto truck.....IV 502
- Chief plants in west.....IV 501
- Demand for passenger.....IV 502
- New York imports.....IV 501
- Number in New York.....IV 501
- Operating cost of auto trucks and horse trucks.....IV 503
- Size of industry.....IV 500
- Statistics of.....IV 500
- Used as drays.....IV 502
- Automobiles**.....
- Rapid growth of.....IV 504
- B**
- Bachelder, John**.....
- Inventions, of.....VII 344
- Back, Harry E.**.....
- Manual training in public schools.....VIII 418
- Bacteriology**.....
- Agriculture and.....V 430
- American.....VII 18
- Government's work in.....VII 44
- Pasteur, work of.....VII 34
- Bainbridge, William**.....
- Naval officer.....IX 255
- Baker, Ray Stannard**.....
- Commerce of great lakes.....IV 141
- P. C. Hewitt's work.....VII 183
- Baking powder**.....
- Adulterated.....X 292
- Baldwin, Mark**.....
- Sociologist.....VII 97
- Baldwin, Matthias W.**.....
- Locomotive builder.....IV 384
- Baldwin, Simeon E.**.....
- President, agreements made by.....II 217
- President, power of in Hague convention.....II 221
- Supreme courts, American system of.....II 76
- United States as a world power.....II 196
- Baldwin Locomotive works**.....VIII 286
- Balloons**.....
- In war.....IX 390
- Baltimore, U. S. cruiser**.....IX 293
- Banks**.....
- Capitalization of.....III 416
- Causes of failures.....III 444
- Clearing houses.....III 414
- Clearings.....III 479

Banks—Continued.

- Concentration of banking, (C. J. Bullock).....III 411
 Consolidation, benefits of.....III 421
 Consolidation of, in other countries.....III 423
 Corporations and.....III 414
 Early American efforts.....III 10
 Foreign capital in U. S.....III 31
 Future concentration of.....III 424
 Government control of, (W. B. Ridgely).....III 441
 Hamilton's dislike for.....III 403
 Insurance and.....III 453
 Insurance companies' control of.....III 419
 Merging of.....III 416
 Morgan, J. P., controlled by.....III 419
 National.....III 443
 National bank act, first.....III 443
 National bureau.....III 445
 National, growth of.....III 447
 National Park, affiliations of.....III 420
 North American, chartered.....III 35
 Number of, in U. S.....III 411
 Relation of, intricate.....III 417
 Speculation and.....III 425
 Standard oil and.....III 418
 State control and.....III 45
 Statistics of.....III 446
 Trust companies.....III 434
 Trust companies and.....III 448
 United States, chartered.....III 35
 Volume of business of.....III 415
 Wall street speculation, and.....III 379
 (See also trust companies).....
- Banking**.....
 Deposits in U. S.....III 478
 Bar, Ben de, player.....I 315
 Barbour, H. E.....
 Typewriters.....VII 385
 Bard, John, physician.....VII 407
 Barings, the.....
 And Stephen Girard.....III 408
 Barley.....
 Area and production.....V 5
 Crops, relative value of.....V 13
 Barnard, Charles.....
 Social and economic effects of railroads.....IV 244
 Barrett, Lawrence.....I 315
 Bartol, B. H.....
 Designer of the New Ironsides.....IX 329
 Barium.....VI 322
 Barytes.....
 (J. H. Pratt).....VI 443
 Growth of industry of.....VI 444
 Occurrence of.....VI 443
 U. S., in.....VI 444
 Batchelor, Charles.....
 Edison's assistant.....VII 195
 Battles (see war).....

Battleships.....

- Battery power and size.....IX 312
 Classes of.....IX 309
 Concentration of gun fire.....IX 314
 Cost of.....IX 311
 Displacement of.....IX 310
 Gun-power.....IX 313
 Modern tactics.....IX 315
 Gun-building, principles of.....IX 313
 Recent advance in, (J. D. J. Kelley).....IX 308
 Size of increased.....IX 311
 Weight of.....IX 311
 Weights of guns.....IX 313
Bauxites.....
 (J. Struthers).....VI 266
 Deposits of in Europe.....VI 267-8
 Distribution of in U. S.....VI 266
 History of in U. S.....VI 266
 Mining of.....VI 267
 Occurrence of.....VI 269
 Properties of.....VI 268
 Varieties of.....VI 267
Beach, A. Ely.....
 Typewriter patents of.....VII 399
Beans, castor.....
 Area and production.....V 7
Beans, navy.....
 Crops, first American.....V 21
Beardsley, Charles.....
 Tariff and the trusts.....III 361
Beaumont, Dr......
 Researches on stomach.....VII 419
Bebel, August.....
 Woman.....I 409
Beef.....
 Beef industry, (J. R. Garfield).....V 174
 Cattle, raising.....V 175
 Exports.....V 32
 Live stock, marketing.....V 174
 (See also packing).....
Beer.....
 Adulterated.....X 203-4
Beets, sugar.....
 Area and production.....V 6
 (See also sugar).....
Behel, Jacob.....
 Patents of.....V 91
Behring Sea.....
 Supreme court in dispute concerning.....II 91
Belfield, W. T......
 Researches of.....VII 421
Belgium.....
 Early trusts in.....II 354
Bell, Alexander Melville.....VII 171
Bell, Alexander Graham.....VII 9
 Deaf mutes and.....X 159
 Early experiments.....VII 177
 Invention of telephone.....VII 171

- Bell, Alexander Graham—Continued.
 Inventor of telephone.....VII 137
 Undulatory theory of.....VII 174
 Bell, John, physician.....VII 414
 Bell, Louis.....
 Economy of electric power distribution.....III 345
 Electric lighting.....VII 154
 Bell, Patrick.....
 Reaper of.....V 76
 Bennington, U. S., gunboat.....IX 296
 Bentley, Edward M., electrician.....VII 139
 Benton, Thomas H.....
 Reduction of tariff in 1833.....II 322
 Beryls.....VI 329
 Bessemer, Henry.....
 Process of.....VII 29
 (See also iron).....
 Biddle, James.....
 Sword of.....IX 394
 Blenville, Jean Baptiste de.....
 Founded New Orleans.....II 268
 Biglow, Henry J.....
 Ether, use of, publication of.....VII 416
 Bigelow, Jacob, physician.....VII 412
 Binney, Horace.....
 Confederation, American.....II 59
 Biology (see zoology).....
 Bird, Robert M., author.....I 356
 Birkinbine, John.....
 Iron ores.....VI 61
 Birkinbine, John.....
 Mechanical engineering in mining VI 446
 Progress of mining industry.....VI 446
 Bitumen.....
 J. Struthers.....VI 395
 Blackberries.....
 Burbank's.....VII 106
 Blaine James G.....
 Monroe Doctrine.....II 187
 Work of, for reciprocity.....II 380
 Bland, Richard.....II 409
 Blast furnaces.....VI 87
 Size of American.....VI 87
 (See also iron).....
 Blind, the.....
 Education of.....X 96
 Institutions for, (G. L. Smead).....X 93
 Institutions for, nature of.....X 94
 Mental training.....X 98
 Music and.....X 102
 Physical culture for.....X 98
 Problem of.....X 96
 Blockades.....
 Of Spanish American ports for debts.....II 188
 Proposed, of Venezuela, for debt.....II 189
 (See also diplomacy).....
 Boats, submarine.....
 Guns in.....IX 291
 (See also steamboats).....
 Bobbs, John Stough, surgeon.....VII 434
 Boer war.....
 Intervention requested.....II 197
 Bohn, Lawrence, physician.....VII 402
 Bon Marché, the.....VIII 311
 Bond, William C., astronomer.....VII 64-74
 Bonds, U. S.....
 From 1846 to 1861.....II 326
 Increase from 1883.....II 406
 Books (see literature).....
 Boots and shoes.....
 Horse power in.....VII 214
 (See also shoes).....
 Booth, Edwin.....I 312, 314
 Borax.....
 (J. Struthers).....VI 414
 Chemistry of.....VI 417
 Deposits of, in U. S.....VI 415
 In California.....VI 416
 Mining of.....VI 415
 Mines, American.....VI 416
 Occurrence and history of.....VI 414
 Occurrence of.....VI 417
 Preservative.....X 296
 Production of.....VI 415
 Reduction of.....VI 419
 Uses of.....VI 418
 Manufacture, various processes of.....VI 419
 Boré, Etienne de.....
 Sugar invention of.....V 211
 Boshard, John A.....
 The Sewing machine.....VII 339
 Boston.....
 Steam plants in.....VII 229
 Boston, (U. S., cruiser).....IX 292
 Boston & Albany railroad.....
 Ownership of.....III 332
 Boston & Maine railroad.....
 Ownership of.....III 332
 Boston library.....
 American art, in.....I 334
 Botany.....
 Problems of American.....V 414
 World's debt to.....VII 32
 Boucicault, Dion.....I 310
 Boughton, D. H.....
 National guard.....IX 123
 Bowditch, Nathaniel.....
 And early American astronomy.....VII 69
 Bowditch, William, astronomer.....VII 71
 de Bower, Edward W.....
 The American salesman.....IV 506
 Bowman, Alexander H.....
 Architect, first supervising.....I 230
 Boyce, Joseph.....
 Reaper of.....V 73

- Boycotts.**
 Compulsion not bargaining..... III 314
 (See also strikes, industry,
 and labor)
- Boyesen, H. H.**.....
 Old American sea fights.....IX 263
- Bradford, Wm., author**.....I 350
- Bradstreet, Anne, author**.....I 350
- Brainard, Daniel, surgeon**.....VII 432
- Brandes, American**.....V 254
- Brazil, cotton growing**.....V 140
- Brewer, Supreme Justice David J.**.....
 Bribery (See corruption)
 Civic duty.....II 108
- Brick**.....
 Trusts.....III 164
 (See also clay)
- Bricklayers, conditions of**.....VIII 20
- Bridges, American, and bridge build-
 ing**
 (Henry S. Jacoby).....IV 400
 American, building, (T. C.
 Clarke).....IV 394
 American, abroad.....IV 203
 Advantage of one design.....IV 403
 Boston-Cambridge.....IV 414
 Brooklyn.....IV 410
 Chicago.....IV 413
 C. & O. railway, great terminal
 of.....IV 407
 Compared with European.....IV 396
 Concrete and steel arch.....IV 412
 Detail of designs.....IV 405
 Duluth, unique.....IV 414
 Engineer's part in growth of.....IV 395
 Foreign bridges, noted.....IV 398
 Great, Des Moines valley
 viaduct, the.....IV 407
 Growth of, causes of.....IV 394
 Highway, poor.....IV 409
 Length of span.....IV 405
 Markets for.....IV 394
 Memphis.....IV 409
 Minneapolis.....IV 411
 Moving, notable.....IV 413
 Niagara.....IV 411
 Old, problems of replacing.....IV 415
 Pittsburgh.....IV 410
 Plate girder.....IV 405
 Railroad loading, uniform.....IV 401
 Railroads an impetus to.....IV 400
 Riveted bridges.....IV 406
 Rockville, great stone.....IV 413
 St. Louis, world famous.....IV 410
 Standard material specified.....IV 402-3
 Supremacy of, (Thomas Curtis
 Clarke).....IV 394
 Tests for material.....IV 402
 Topeka, great steel.....IV 412
 Truss, heavy American.....IV 407
 Truss span, longest.....IV 407
- Bridges—Continued.**
 Truss, improvements in.....IV 408
 Washington, over the Harlem.....IV 411
 Brooklyn (cruiser).....IX 299
 Brooklyn Polytechnic school.....VII 302
 Brooks, John Graham.....
 Trade union labels.....VIII 181
 Broom corn, area and production.....V 7
 Brophy Truman W.....
 American dentistry.....VII 437
 Brown, Archer.....
 Foundations of American iron
 industry.....VI 95
 Bryant, William Cullen.....I 354
 Brush, Charles F., electrician.....VII 138
 Browne, Chas. F., humorist.....I 365
 Brown, Jacob, soldier.....IX 4
 Buchanan, James.....
 Message of on tariff.....II 328
 Buck, D. A. A.....
 Watch, invention of.....VII 360
 Buck, H. W.....
 Niagara power, utilization of.....VII 240
 Buckland, W.....
 Glaciation.....VII 51
 Buckwheat.....
 Area and production.....V 5
 Cultivation, early.....V 21
 Buffaloes, in 1900.....V 47
 Building associations (see associa-
 tions, building and loan)
- Building trades**.....
 English.....VIII 211
 U. S., in.....VIII 213
 Unions of.....VIII 211
- Buildings, high**.....
 Calissons for.....I 290
 Character of city.....I 285
 Congestors of streets.....I 297
 Conveniences in.....I 293
 Drainage of.....I 293
 Fire proofing.....I 288, 295
 Floor construction.....I 288
 Floor space in cellars.....I 292
 Foundations of.....I 289
 Frame of skyscraper.....I 287
 Light obscured by.....I 296
 New York.....I 296
 Office, like bridges.....I 286
 Jenney, W. L. B., originated by.....289
 People housed in.....I 293
 Piles in foundations.....I 291
 Power plants of.....I 293
 Power used by.....VII 347
 Rust of steel work of.....I 294
 Safety of.....I 291
 Skyscrapers, modern (A. W.
 French).....I 285
 Specifications for city.....I 286
 Steel type construction.....I 285
 Value of sites.....I 285
 Vibration guarded against.....I 283

- Buildings, high—*Continued*.....
 Walls as curtains.....I 286
 Walls, how made.....I 288
 Wind and high.....I 287
 (See also tenements).....
 Bull, Ephraim Wales.....
 Grape, culture of.....V 253
 Bullock, Charles J.....
 Concentration of banking in
 U.S.....III 411
 Good and bad of trusts.....III 121
 Bunker, Henry C.....I 366
 Burbank, Luther.....
 Methods of.....VII 108
 Work of (H. W. Field).....VII 106
 Burdick, Francis M.....
 Lawyer's place in American
 life.....II 93
 Burgess, John.....
 The state.....I 80
 Burgess, John W.....
 Political scientist.....VII 94
 Burglary.....
 Trust companies and.....III 435
 Burgoyne, John, British soldier.....IX 19
 Burke, Edmund.....
 Conciliation, speech on.....II 98
 Burnett, Frances Hodgson.....I 365
 Burr, Aaron.....
 As financier.....III 406
 Bury, Richard, De.....
 Estimate of legal profession.....II 93
 Butler, Nicholas Murray.....
 American colleges.....I 154
 Principles of American education.....I 78
 Business men.....
 Educational needs of.....I 218
 University training for, (S. N.
 Patten).....I 218
 Butter.....
 Exports.....V 32
 Butterfield, Kenyon L.....
 Federation of rural social forces.....V 354
 Butterine.....
 Exports.....V 32
- C**
- Cable, George W.....I 365
 Cables (see telegraphs).....
 Cactus.....
 Burbank's.....VII 107
 Calasone.....
 High buildings, for.....I 290
 Calico.....
 Cotton production.....V 142
 Print machine, early.....VII 270
 California.....
 Admitted to Union.....II 285
 Ceded to U. S.....II 283
 Cruiser.....IX 302
 History.....II 281
 California—*Continued*.....
 Industries of.....III 366
 Railroads, helped by.....IV 211
 Raisins, first in.....V 244
 Wines of.....V 261, 272
 University of (see University
 of California).....
 Californite.....VI 332
 Callender, G. S.....
 Pioneers of American industry.....III 8
 Campbell, Helen.....
 Prisoners of poverty.....VIII 190
 Campion, John.....
 Fire fighters.....X 222
 Canada.....
 American trade, with.....IV 43
 Behring Sea fishery cases.....II 91
 Conquest of.....IX 15
 Immigration smuggled through.....X 124
 Loyalty of in revolution.....IX 18
 War of 1812 and.....IX 31-2
 Canal, Isthmian.....
 American internal trade.....IV 185-6
 American policy defined.....II 235
 American policy of 1858.....II 240
 American support of.....II 146
 Asia, trade with.....IV 185
 Attitude of American govern-
 ment.....II 228
 Attitude of U. S. government
 toward, (Ira D. Travis).....II 228
 Britain and U. S. irreconcilable.....II 244
 Central west, and.....IV 189
 Chicago Pacific coast trade.....IV 189
 Clayton-Bulwer controversy.....II 237
 Clayton-Bulwer treaty.....II 235
 Cleveland's open policy.....II 245
 Coal shipments.....IV 189
 Colombian treaty of 1869.....II 241
 of 1870.....II 241
 Congress asserts need of.....II 230
 Control, American attempt to
 secure exclusive.....II 241
 Distances via, table of.....IV 183
 Dutch company.....II 229
 Economic aspects of, (Emory R.
 Johnson).....IV 181
 Exclusion, American policy of.....II 232
 First American action on.....II 228
 Freedom of declared.....II 168
 Frelinghuysen-Zavala treaty of
 1884.....I 245
 French company at Panama.....II 243
 Gadsden treaty, effect of.....II 237
 Grant's proposed survey.....II 240
 Guaranty bill of 1891.....II 246
 Hawaiian trade.....IV 185
 Hayes, President, asserts Ameri-
 can supremacy of.....II 243
 Hay-Pauncefote treaty.....II 246

Canal, Isthmian—Continued.

- History, diplomatic.....II 228
 Iron trade and.....IV 188
 Monroe doctrine.....II 243
 Nicaraguan treaty.....II 240
 Pacific trade and.....IV 184
 Panama, proposed by New
 Granada.....II 232
 Panama road, protection of.....I 238
 Policy of 1881.....II 244
 Railroads, American.....IV 192
 Reasons for.....IV 181
 Resolution of 1835.....II 230
 of 1839.....II 231
 Rights of Central American
 republics.....II 239
 Ship building.....IV 190
 South American trade.....IV 184
 Southern states and.....IV 186
 Suez tonnage.....IV 196
 Tehuantepec route, reservation
 in, American.....II 238
 Tehuantepec ship railroad.....II 234
 treaty with Mexico.....II 238
 Tolls, rate of.....IV 196-7
 Tonnage and tolls.....IV 163
 Trade, New York-Pacific coast.....IV 188
 Trade route, as a.....IV 182
 Treaty of 1846.....II 233
 Various bills for.....II 249
 Wheaton, Henry.....II 232
 (See also trade)
 Canal, Panama (see Panama)
 Canals.....
 Chicago drainage and American
 machinery.....VII 204
 Coal, early.....III 26
 Development of early American.....III 25
 English, profits in.....III 32
 Financial difficulties in early
 American.....III 24
 Internal American.....IV 150
 Jefferson's policy.....III 9
 Rariton, planned.....III 26
 Suez, commercial influence of.....IV 20
 treaty based on American
 principles.....II 168
 Tonnage of Suez.....IV 196
 Traffic on American.....IV 239
 (See also Panama)
 Canning, George.....
 Monroe doctrine, supports U. S.
 in.....II 169
 Canning and preserving (see specific
 heads)
 Canning industry.....
 Poisons and.....VII 34
 Cannon (see guns)
 Capital.....
 Concentration of.....III 49
 Consolidation of, labor and.....III 96

Capital—Continued.

- Cooperation of labor and, (W. H.
 Fahler).....VIII 89
 Corporations, small for early.....III 39
 Definition of capitalism.....III 49
 Duties of to labor.....IV 516
 Feudalism of mines.....VIII 328
 Foreign, early invitation to.....III 32
 Foreign capital in U. S., early.....III 31
 Foreign in U. S. in 1836, esti-
 mate of.....III 33
 Industrial commission on.....VIII 29
 Industry, its part in.....VIII 90
 its share of.....III 93
 Labor, dispute of with.....VIII 91
 Organization of.....VIII 91
 Problems of.....VIII 139
 Promoters help investment of.....III 232
 Supplies of, early American.....III 29
 Trusts, overcapitalization of.....III 205
 West, demand for in early.....III 24
 (See also civic federation, labor,
 trusts, railroads, banks)
 Capron, Allyn K., soldier, naval hero IX 396-7
 Captain of industry, and his ten-
 tenants, the (W. R. Lawson) III 244
 Cars, railway.....
 Brakes.....IV 392
 Capacity of freight.....IV 392
 Character of.....IV 391
 History of, early.....IV 391
 Pullman's invention.....IV 391
 Steel freight.....IV 392
 The development of, (George
 A. Hutchins).....IX 399
 (See also railroads)
 Carey, Henry C.....
 Increase of tariff in 1842.....II 324
 Carnegie, Andrew.....
 (C. M. Schwab).....VI 147
 Business purposes of.....VI 153
 Cyclops plant founded.....VI 148
 Edgar Thomson company.....VI 149
 Employees' share in works of.....III 280
 Enterprises, scope of.....VI 151
 Future industry, forecast of.....III 281
 Homestead works.....VI 150
 Institute, motive of.....II 449
 Iron and steel, uncertainty of.....III 278-9
 Lucy stack, increase of.....IV 154
 Organization of manufacturing
 industries.....III 273
 Output of works.....VI 152
 Partners, buying out his.....III 278
 Peace arbitration, gift of to.....II 106
 Philanthropy to employees.....IV 155
 Success of, cause of.....VI 152
 Success, tells the secret of his.....III 278
 Wages, on investment of.....III 279
 (See also iron, steel corporation,
 United States)

- Carnochan, John Murray, surgeon....VII 432
- Carolina, South.....
- Cotton, introduction of.....III 29
- Carolinas, the.....
- Lawyers in the early.....II 95
- Carroll, John.....II 24
- Carter, James C.....
- Army and.....IX 114
- Municipal government.....II 433
- Cartridges (see guns).....
- Castine, gunboat.....IX 297
- Castlereagh, Lord.....
- Favored Holy Alliance.....II 169
- Catlinite.....VI 338
- Catholic, Roman (see Roman catholic)
- Catholic University, the (see Roman catholic)
- Cattle.....
- Railroad and monopoly.....IV 339
- (See also live stock).....
- Cement.....
- Trust, the.....III 164
- Connabar.....VI 293
- Census, provision for by second congress.....II 50
- the trusts in the light of, (W. R. Merriam).....III 169
- Central America.....
- Governments of and, isthmian canal.....II 230
- Republics of, rights of, in canal grants.....II 239
- Central Pacific railroad.....
- Military line.....III 371
- Cereals.....
- Area and production in U. S.....V 6
- Cervera, Admiral, Spanish officer.....IX 243
- Chalcedonies.....VI 344
- Chapman, Nathaniel, physician.....VII 413
- Charity.....
- Cuban.....II 303
- Institutions for the blind, (G. L. Smead).....X 93
- Porto Rico.....II 301
- Charities.....
- (C. R. Henderson).....X 1
- Abuses of in cities.....X 46
- Blind and deaf.....IX 32
- Child labor.....X 16
- Children's homes.....X 33
- Christian, early.....X 2
- Churches and.....X 47
- Cost of institutions by states.....X 28
- Cuban.....II 309
- Dispensaries.....X 37
- Drink and.....X 16
- Eberfeld system.....X 3
- Immigration and.....X 4
- Charities—Continued.
- Institutions, benevolent, (John Koren).....X 22
- number and inhabitants.....X 22
- Italy, in.....X 3
- Jewish, (Lee K. Frankel).....X 57
- Methods of organization.....X 9
- National conference of.....X 14
- Expansion of, (A. O. Crozier).....X 18
- Funding of institutions.....X 27
- Grand Rapids movement.....X 20
- Homes, permanent.....X 39
- Hospital statistics.....X 34
- Hospitals, cost of.....X 35
- preponderance of.....X 30
- Number of aided by states.....X 24
- Number of aided in institutions.....X 23
- Nurseries.....X 34
- Organization and federation of.....X 5
- methods of.....X 19
- Orphanages.....X 31
- Pay of workers, inadequate.....X 19
- Poor laws.....X 2
- Poorhouses.....X 43
- Preventive means.....X 14
- Private and public.....X 4
- Private, primacy of.....X 25
- Problems of.....X 15
- Science in relief.....X 45
- State control of.....X 7
- dangers of.....X 11
- inevitable.....X 12
- State regulation of.....X 3
- Supervision of in Austria.....X 8
- in Belgium.....X 8
- in Germany and Britain.....X 7
- need of central.....X 48
- Theory and practice of.....X 1
- (See also insanity, Jews, philanthropy, relief, poor).....
- Charles River Bridge Co. vs. Warren Bridge.....II 71
- Charleston, (U. S. cruiser).....IX 292-302
- Chase, Salmon P.....
- As financier.....III 404
- Decision on indestructibility of Union.....II 85
- Indivisibility of Union.....II 75
- Choese.....
- Exports.....V 32
- (See also dairying).....
- Cholmers, Lionel.....
- American physician.....VII 405
- Chemistry.....
- American.....VII 14
- Debt to, world's.....VII 31
- Industrial electro-chemistry (E. F. Roeber).....VII 140
- Industry, importance of in.....VII 84
- Needs of in U. S.....VII 86

- Pasteur.....VII 34
 Plant life.....V 4
 Railroads, used by.....VII 85
 U. S. and.....VII 84
 (See also electricity).....
- Chemicals**.....
 Trusts, statistics of.....III 164
- Chicago**.....
 Astronomy and.....VII 78
 Buildings, high, originated in.....I 289
 Crime in.....II 109
 Grain speculation, center of.....III 385
 Immigrants and trades unions
 in.....VIII 226
 Isthmian canal Pacific trade.....II 189
 Lumber market.....III 361
 Packing center, its rise as.....V 176
 Population, its heterogeneous.....II 113
 Western industry, and.....III 368
- Chicago (U. S. cruiser).....IX 292-3
 Chicago & Great Western railroad...
 Ownership of.....III 332
- Chicago, University of, (see Univer-
 sity of Chicago).....
- Chickens**.....
 Production.....V 30
- Child labor**.....VIII 15
 Abuses of.....VIII 82
 America, and.....VIII 15
 Coal mines and.....VIII 354
 Education and.....I 104
 Education, compulsory.....V.I 60
 Employers, requirements of.....VIII 69
 Exploited by machinery.....VI.I 373
 Factory acts, provoked.....VIII 73
 Hours.....VIII 61
 Ideal law.....VIII 65
 Illiteracy laws.....VIII 60
 Law, evading.....VIII 63
 Laws, in various states.....VIII 67
 Inadequacy of.....VIII 62
 Legislation, early.....VIII 64
 Legislation, (Florence Kelley)...VIII 66
 Massachusetts laws.....VIII 56
 Night work.....VIII 62
 South, in the.....VIII 83
- Children**.....
 Aiding poor.....X 162
 Charity and.....X 9
 Court of homes.....X 32
 Criminal statistics of.....X 132
 Crippled.....X 159
 Cruelty to.....X 165
 Defectives, care of.....X 157
 George junior republic.....X 166
 Girls, reform schools for.....X 166
 Public nurseries.....X 34
 Race suicide and.....X 208
 State aid for poor.....X 163
 Summer colonies for.....X 169
 (See also orphans).....
- China**.....
 Agreement between and the
 powers.....II 227
 America the friend of.....II 260
 American geographical advan-
 tages.....II 262
 American rights to open door.....II 133
 As buyer of American cotton.....IV 115
 British and American trade
 with.....IV 8-9
 Commercial interest in.....II 248
 Cotton, American supplies of, to.....III 100
 Cotton mills of.....II 251
 Europe, compared industrially
 with.....II 258
 Exclusion act.....VIII 200
 Exclusion of.....VIII 232
 Immigration of.....VIII 247
 Industries, growth of its.....II 256
 Laborers, as.....VIII 252
 Lawyers in.....II 100
 Opportunities for American
 capital.....II 251
 Philippine conquest opens.....II 200
 Philippines and the open door.....II 134
 Solvency in business.....II 254
 Trade with, importance of.....IV 203
 Trade with, not helped by Phil-
 ippine purchase.....II 132
 Transportation rates and wages
 in.....IV 214
 Trusts in.....III 101
 Wages and railroads in.....VIII 412
- Chisholm vs. Georgia.....II 63
 Marshall's opinion.....II 64
- Chlorastrolite.....VI 334
- Choate, Mrs. William G.....
 Philanthropist.....X 220
- Chromium**.....
 Steel making, use of in.....VI 177
- Chrysoprase**.....VI 345
- Church, the, (see religion)**.....
- Churchill, Winston**.....I 366
- Cider**.....
 Experiments, government.....VII 44
- Cigar makers**.....
 Conditions of.....VIII 190
 Label, union, adopt.....VIII 182
 Strikes of.....VIII 157
- Cigars (see tobacco)**.....
- Cigarettes (see tobacco)**.....
- Cincinnati**.....
 Packing center, decline of as.....V 177
- Cities**.....
 Appointment of police in.....II 430
 Civil service reform, need of.....II 119
 Congestion of.....II 429
 Conscience, tone of popular.....II 121
 Crime and poverty in, (J. R.
 Commons).....X 128
 Crime, their legal relation to.....II 109

- Cities—Continued.
- Criminal statistics of.....X 131
 - Democratic rule a failure.....II 119
 - Gambling, dangers of in.....II 118
 - Garbage laws necessary in.....II 116
 - Growth of American.....II 429
 - Growth of.....III 347
 - Hurry of life in.....II 111
 - Influx to, causes of.....X 130
 - Law, difficulty of enforcing in.....II 113
 - Laws, results of violating in.....II 114
 - Meccas for cranks.....II 110
 - Nation must morally master its.....II 119
 - Need of parks in.....II 114
 - Platting of, wisdom in.....II 113
 - Policing, too much, not good.....II 120
 - Policeman's lot in.....II 116
 - Political machine in.....II 430
 - Population of city and country.....X 128
 - Prosperity, centers of.....I 64
 - Saloons of.....II 117
 - Sites of American.....IV 29
 - Shums of, filth in.....II 113
 - Suicide, cause of, in.....II 118
 - Subways, New York.....IV 451
 - Track elevation in.....IV 238
 - (See also buildings).....
 - Citizenship, American.....
 - (David J. Brewer).....II 108
 - (Grover Cleveland).....II 1
 - Creed of, Grover Cleveland.....II 7
 - Education and.....I 241
 - Typical American.....I 7
 - Civic duty.....
 - (David J. Brewer).....II 108
 - Inattention to.....II 116
 - Civic federation.....
 - Arbiter, not an.....VIII 101
 - Purpose of.....VIII 100
 - Work of, (O. S. Straus).....VIII 100
 - Civil service.....
 - Abraham Lincoln, and.....II 413
 - Corruption in.....II 407
 - Merit system in municipalities, (O. R. Woodruff).....II 428
 - Pensions and.....II 414
 - Political evils of.....II 430
 - President's part in.....II 412
 - Reform act of 1883.....II 406
 - Reform, beginning of.....II 410
 - English.....II 411
 - Need of, in cities.....II 119
 - Theory of.....II 412
 - Civil war.....
 - Agriculture, influence of on.....V 43
 - Cause of.....II 29
 - Civilization.....
 - Lawyers an index to.....II 105
 - War factories, and.....I 60
 - Clark, Alonso.....
 - Researches of.....VII 420
 - Clark, Alvan.....VII 58
 - Work of.....VII 5
 - Clark, E. O.....
 - Naval Officer.....IX 298
 - Clark, John Bates.....
 - Monopoly and the struggle of the classes.....VIII 127
 - Trusts and potential competition.....III 139
 - Clark, John R.....
 - Political economist.....VII 95
 - Clark, Ransom.....
 - Sword of.....IX 398
 - Clark, Thomas C.....
 - Cyanide patent of.....VI 230
 - Clarke, F. W.....
 - Chemistry in U. S.....VII 84
 - Clarke, Sir George.....
 - Strategic value of West Indies.....IX 406
 - Clarke, Grace Riley.....V 292
 - American tea gardens.....V 292
 - Tea culture in U. S.....V 292
 - Clarke, Thomas Curtis.....
 - American bridge building.....IV 394
 - American supremacy in bridge building.....IV 394
 - Clay.....
 - Ball.....VI 312
 - Brick.....VI 313
 - Fire.....VI 313
 - Mining of.....VI 314
 - Paper.....VI 314
 - Pottery.....VI 315
 - Preparing, for market.....VI 315
 - Slip.....VI 314
 - Trust, the.....III 164
 - Uses of.....VI 315-16
 - Vitrified.....VI 313
 - Clay Henry.....
 - Canal, freedom of interoceanic.....II 168
 - Tariff.....II 320
 - Clayton-Bulwer treaty.....II 235
 - Controversy over.....II 237
 - Clemens, Samuel C.....I 362
 - Cleveland, Grover.....
 - American good citizenship.....II 1
 - Capital and labor.....II 5
 - Creed of good citizenship.....II 7
 - Free trade, opposed to.....II 334
 - Good government.....II 6
 - Open canal, policy of.....II 245
 - Overconfidence of patriotism.....II 3
 - Political corruption.....II 4
 - Political duties.....II 6
 - Political partisanship.....II 8
 - Purpose of American government.....II 4
 - Venezuela boundary dispute.....II 162
 - Cleveland Cliffs Iron company.....VIII 335

- Climate**.....
 Tree planting, and.....V 19
 United States.....IV 28-8
 (See also races).....
- Clossy, Samuel, physician**.....VII 407
- Clothing**.....
 New England manufacture of,
 early.....IV 78
 Producer of, U. S. largest.....IV 35
- Coal**.....
 (E. W. Parker).....VI 182
 American and British produc-
 tion.....VI 188
 Britain loses supremacy in.....VI 188
 Canal, Isthmian, and.....IV 188
 Coal fields, American.....VII 50
 Coke and.....VI 192
 Demand for bituminous and
 anthracite.....VI 191
 Deposits in different countries.....VI 3
 Development of, in the West.....IV 291
 Development of U. S. resources.....VI 183
 Electric coal cutters.....VI 41
 Electricity in mining.....VI 38
 Raton mines.....VI 39
 Fields of U. S.....VI 182
 Formation of.....VII 48
 Handling of at mines.....VI 34
 History in U. S., early.....VI 188
 Iron industry and.....VI 189
 Mining of in U. S., early.....VI 4
 Production of anthracite.....VI 184
 Production of in U. S. from
 1820.....VI 183
 Production from 1860, world's.....VI 187
 Quantity transported.....VI 190
 Quantity transported in U. S.....VI 190
 Railroads.....IV 333
 Railways and.....VI 189
 World's need of, (O. P. Austin).....VI 186
 World's need and U. S. supply.....VI 186
 (See also geology, petroleum)...
- Coal oil (see petroleum)**.....
- Cobalt**.....
 Hardening steel.....VI 178
- Cochran, M. M.**.....
 Coke industry and.....VI 194
- Cochran, Mordcael**.....
 Discoverer of coke.....VI 194
- Cocoanuts**.....
 Production.....V 250
- Code, penal, (see crime)**.....
- Coducation (see education)**.....
- Coiron, John J.**.....
 Sugar cane of.....V 216
- Coke**.....
 By-product of natural gas.....VI 390
 Coking methods.....VI 200
 Connellsville coke region, (F. E.
 Saward).....VI 193
- Coke—Continued.**
 Connellsville, output at.....VI 198
 Connellsville production.....VI 194
 History in U. S., early.....VI 195
 Hoisting machinery.....VI 199
 Oliver works.....VI 197
 Operating machinery.....VI 196
 (See also coal, iron and steel)...
- Cokely, M.**.....
 Machine shop conditions.....VIII 357
- Coles, Elizabeth N.**.....
 Philanthropist.....X 221
- College architecture (see architecture)**
- College, naval war**.....IX 368
- Colleges**.....
 (N. M. Butler).....I 154
 (C. P. Huntington).....I 240
 Academies, modern.....I 156
 Agricultural, statistics of.....V 60
 Alumni.....I 167
 American, early.....I 154
 Backward.....I 156
 Benefactions for.....I 168
 Cheap, needed.....I 170
 Course, length of.....I 158
 Cheap tuition and.....I 170
 Cooperation, need of.....I 155
 Courses, shortened.....I 162
 Distribution, geographical.....I 171
 Elective studies.....I 174
 Expression of democracy.....I 173
 Finishing schools.....I 161
 Four years term accidental.....I 160
 Future of, plans for.....I 161
 High schools, fed by.....I 173
 Income of small.....I 162
 Individualism, need of.....I 184
 Junior.....I 181
 Large, hostility to.....I 166
 Length of course.....I 181
 Migration.....I 178
 Naval war, (H. Wilson).....IX 366
 Number of small, in U. S.....I 162
 Old and new.....I 156-7
 Permanency of.....I 164
 Policy in, not definite.....I 157
 Professional schools.....I 176
 Reconstruction of.....I 162
 Religion and.....I 172
 Religious spirit in.....I 175
 Replacing high schools.....I 183
 Requirements of.....I 174
 Salaries in.....I 177
 Sameness of.....I 183-4
 Secondary training and.....I 169
 Small, advantages of.....I 165
 Small, distinctively American.....I 171
 Small, future of (W. R. Harper).....I 164
 Small, special demand for.....I 169
 Small, sympathy for.....I 167
 State universities and.....I 178

- Colleges—Continued.
 Survival of fittest.....I 180
 Teachers, heroism of.....I 187
 Transition places.....I 169
 Universities, transformed to.....I 160
 (See also education).....—
- Colombia, United States of.....
 Canal treaty of 1869.....II 240
 of 1870.....II 241
 Isthmian canal and.....II 238
- Colonies the.....
 Area of, problematical.....II 266
 British capital in.....IV 85
 British encouragement of manu-
 factures.....IV 82
 Commerce of.....IV 66
 Commerce of, Adam Smith.....IV 77
 Committee on grievances against
 Great Britain.....II 13
 Declaration of freedom of, by
 Virginia.....II 11
 Manufactures, embargo on co-
 lonial.....IV 76
 English bottoms, law favoring.....IV 74
 Franklin's "Canada Pamphlet".....IV 76
 Freedom of, debates of Jay,
 Duane, Livingstone, Rutledge.....II 13
 Hate, manufacture of.....IV 79
 Iron and steel, manufacture of.....IV 81
 Iron, pig, in southern.....IV 78
 John Adams, part of, in freeing.....II 11
 John Dickinson opponent of
 freedom of.....II 12
 Laws restraining commerce of.....IV 70
 Lawyers, led by.....II 89
 Literature in.....I 349
 Manufactures, restriction of, in.....IV 75
 Molasses, embargo on.....IV 83
 Sam Adams, Roger Sherman,
 Oliver Wolcott and George
 Wythe, part of, in freeing.....II 12
 Resolution of R. H. Lee freeing.....II 11
 Restraint, British, of trade and
 the revolution.....IV 87
 Restraining legislation, benefits
 of.....IV 85
 Territory claimed by.....II 265
 Tobacco, early importance of.....IV 71
 (See also trade, commerce, ship-
 building).....
- Colonization.....
 Success of, conditions of.....III 14
- Colorado.....
 Admitted.....III 373
 Industries of.....III 367
 Territory of, formed.....II 274
 Cruiser.....IX 302
- Columbia school of mines.....VII 302
- Columbia university.....
 Architecture of.....I 272, 274
 Expansion of.....I 190
- Combinations (see trusts, railroads,
 and banks).....II 246
- Commerce.....
 American and the foreigner.....IV 204
 Physical foundations of.....IV 28
 In Orient.....II 248
 Trade and, (Victor H. Metcalf).....IV 1
 Army, the, and.....IV 517
 Beginning of foreign trade,
 (Worthy P. Sterns).....IV 80
 British capital in colonies.....IV 85
 British encouragement of co-
 lonial.....IV 82
 British legislation on American.....IV 67
 British navy, early American
 fostered by.....IV 69
 Business, early.....III 36-7
 Business education, (S. N.
 Patten).....I 218
 Census, and.....IV 518
 Chicago, east from.....III 363
 China's ability to pay.....II 255
 Cloth, early trade in.....IV 72
 Colonial, L. B. Lecky.....IV 66
 Colonial commerce, Adam
 Smith.....IV 77
 Commercial nations, influence
 of.....IV 253
 Conditions, American, in 1812.....III 16
 Conditions in west, early.....III 15-17
 Consulates, work of.....IV 519
 Corporations, and bureau of.....IV 520
 Cuba.....II 311
 Cuba as gate to Latin trade.....IV 63
 Department of, duties of the.....IV 578
 Department of, scope of the.....IV 521
 Early American, (W. J. Ashley).....IV 65
 Early American.....IV 66
 East and west in U. S.....III 363
 English bottoms, law favoring.....IV 74
 Enumerating enactments of
 England.....IV 70
 Expansion of American, (O. P.
 Austin).....IV 33
 Expansion of American, assured.....IV 61
 Farm areas in the west.....III 364
 Foreign enemy unavailing.....IV 39
 Foreign trade of U. S.....IV 110
 Franklin's Canada Pamphlet.....IV 76
 Future of American, in Orient.....IV 200
 Government and.....IV 517
 Historical.....IV 33
 Iron, colonial manufacture of.....IV 81
 Labor bureau, and.....IV 520
 Lake, and U. S. steel corpora-
 tion.....IV 146
 Lake lading methods, excel-
 lence of.....IV 148
 Laws restraining, in the colonies.....IV 70

Commerce—Continued.

- Lakes, great, of the (Ray S.
Baker).....IV 141
Ships of theIV 143
Tonnage of.....IV 145
Lumber, American.....III 355
Manufactures, embargo on co-
lonialIV 75
Molasses act of 1733, effect of.....IV 83
National trade policy, need of.....IV 126
Navy, the.....IV 517
Railroad regulation, (R. M. La
Follette).....IV 294
Railroads in American.....IV 199
Republican party cause of in-
crease.....II 393
Restraint of colonial, Edmund
BurkeIV 85
Restraining laws, benefits of, on.....IV 86
Retaliation by Europe.....II 390
Revolution, American, British
restraint and the.....IV 87
Revolution, cause of American.....IV 66
Salesman, the American, (E. W.
de Bower).....IV 506
Sens, freedom of, established
by U. S.....II 168
Shipbuilding, early American.....IV 68
Shipbuilding in 1820.....IV 101
South, development of the,
(Charles M. Harvey).....III 371
Standard oil, and.....III 192
Statistics, bureau of.....IV 519
Statistics of American since
1870.....IV 34
United States, supremacy of, in IV 34-8
Tobacco culture, England for-
bade insular.....IV 72
Tobacco, early importance of.....IV 71
 , effect of enumeration on.....IV 73
Tonnage, American, and Euro-
pean compared.....III 6
West, definition of the.....III 363
West, the, general effect of open-
ing of.....III 22
Western, (L. M. Shaw).....III 363
Wheat, influence of, on.....V 156
(See also industry, manufactures,
trade, Great Lakes)
Commerce, interstate, commission...
Constitution, and the.....II 65-68
Constitution, and.....VII 271
Crippled.....IV 320
Early.....III 21
Gibbons vs. Ogden, decision in.....II 69
Commercialism.....
 Spirit of, in AmericaIV 514
 True spirit of.....IV 514
Commission, industrial (see indus-
trial commission).....

- Commons, John R.....
 American people, the.....I 1
 Crime and poverty in cities.....X 128
 Economist.....VIII 26
 Labor and immigration.....VIII 236
 Open shop policy.....VIII 199
Communication.....
 United States, supremacy of.....IV 37
Competition.....
 Foreign view of American,
 (Frederick, Emory).....IV 51
 Races superiority and.....I 66
 Railroad rates.....IV 262
 Wages and.....VIII 270
Compressed air.....
 and its application in the me-
 chanical lines.
 (W. O. Duntley).....VII 246
Chisels, for.....VII 250
Coal mining, and.....VII 253
Convenience of.....VII 248
Drills.....VII 252
General uses of.....VII 248
Hammers.....VII 252
Handwork, replaces.....VII 249
Hoists.....VII 252
Mechanics, value of in.....VII 247
Painter's trade, and.....VII 250
Riveting.....VII 249
Rust cleaner.....VII 250
Saws.....VII 251
Street cleaning.....VII 252
Turbine engines.....VII 251
Comstock lode.....
 Development of.....VI 24
 Fire of.....VI 21
 Methods developed by.....VI 26
 Sutro's work.....VI 25
 Temperature in.....VI 26
Conant, Charles A.....
 American interests in Orient.....II 248
Concord, U. S. gunboat.....IX 296
Confederacy, the.....
 Great names of.....IX 61
 Strategically considered.....IX 190
Confederation, articles of.....II 29, 58
Congress.....
 Continental, work of.....II 10
 Duties of, Justice John Mar-
 shall.....II 66
 Labor legislation, and.....VIII 81
 Pan American, of 1826 and 1890.....II 198
 Right of, to control trusts, (P. C.
 Knox).....III 204
Treasury, power over, check to
 executive.....II 213
Connecticut, battleship.....IX 303
Connellsville.....
 Coke region, (F. E. Saward).....VI 193
 (See also coke).....

- Conspiracy.....
 Labor and.....VIII 199-200
 Consolidation (see trusts and banks).
 Constitution, American.....
 Affecting railroads.....II 73
 Basis for a world constitution.....II 31
 Basis of.....II 78
 Battleship.....IX 35
 Civil war and.....II 72
 Decision in *Gibbons vs. Ogden*.....II 69
 Of Harland on railroad rates.....II 73
 Supreme court on corporate franchises.....II 71
 Dependencies, no place in, for.....II 202
 Difficulties, early, with.....II 61
 Filipinos under, rights of.....II 202
 Gladstone, W. E.....II 60
 Holds the union indivisible.....II 75
 Interpreted by Supreme court.....II 73
 Interstate commerce, and.....II 68
 Legality of the union and.....II 64
 Meaning of, John Marshall.....II 203
 Morris, Gouverneur.....II 202
 Opinion on, Judge Cooley.....II 62
 Organization of government under.....II 61
 Representation and.....II 49
 Safeguards of, unwritten.....II 206
 Supreme court and.....II 62
 Tariff in.....II 315
 Undesirable checks of.....II 202
 Constitution, British.....II 67
 Evils of unwritten.....II 67
 Not unwritten.....II 65
 Constitution, United States, March of, (G. R. Peck).....II 57
 Ship.....IX 35
 Consuls.....
 Commerce, as aid to.....IV 519
 Consular service.....
 Foreign trade, value of in.....IV 117
 Consumption.....
 American.....IV 2-4
 Continental Congress.....
 Vote and debate on independence.....II 18
 Work of, in 1776.....II 10
 Convention, constitutional.....II 78
 Meeting of.....II 59
 Need of.....II 59
 Veto power, plans for.....II 79
 Converse, John H.....
 American locomotives.....IV 384
 Convict labor.....
 Industrial commission on.....VIII 43
 Convicts.....
 In Chicago jails.....II 109
 Statistics of Joliet prison.....II 109
 Cooke, Rose Terry.....
 Novelist.....I 365
 Cooley, Judge.....
 The constitution.....II 62
 Cooley, Thomas M.....
 Higher education.....I 54
 Cooper, James Fenimore.....I 354-5
 Cooper, Peter.....
 Atlantic cables, and.....VII 129
 Built first locomotive.....IV 384
 Cooperation.....
 Dairying, and.....V 195
 Cope, E. D.....
 Discoveries of.....VII 53
 Copper.....
 American copper ores, (A. Lakes).....VI 260
 Arizona districts.....VI 263
 Arizona mines.....VI 265
 Development of in the west.....IV 291
 Export trade in.....VI 256
 History in U. S., early.....VI 252, 254, 262
 How copper occurs.....VI 253
 Japan in, industry.....VI 254
 Lake Superior region.....VI 254
 Lake Superior regions.....VI 264
 Mexico, in industry, quick growth of.....VI 254
 Mined and extracted, how.....VI 257
 Ore in different parts of U. S.....VI 260
 Principal American regions.....VI 261
 Production of by states.....VI 255
 Production since 1801.....VI 253
 Properties of.....VI 256
 Spain leads Europe in.....VI 254
 Supremacy of U. S.....VI 253
 Western beds.....VI 261
 World's supply of, (Jos. M. Sheahan).....VI 252
 Mining of, in U. S., early.....VI 4
 (See also mining).....
 Corn.....
 (C. F. Millsbaugh).....V 158
 Area and production.....V 5
 Broom, (see broom corn).....
 By-products, uses of.....V 164
 Classification of.....V 158
 Colonists, devastation of fields by.....V 161
 Cooking, aboriginal methods of.....V 160
 Crop, greatest of American.....V 163
 Crop of 1904.....IV 164
 Exports.....V 31
 First American crop.....V 21
 History.....V 158
 Incas, the, and.....V 159
 Indians, cultivation by North American.....V 160
 Mexican method of grinding.....V 161
 Origin in the Andes.....V 159
 Production.....V 30
 Religious significance.....V 163
 Starch and glucose.....V 166-71
 Sweet corn, valued food.....V 162
 Corners, on stock etc., (see speculation and individual names)....

- Corporations.....
 Business, early.....III 36
 Commerce, bureau of and.....IV 521
 Detested in Jackson's times.....III 43
 Influence of.....III 377
 Law and lawyers.....X 308
 Part in progress, (W. R. Law-
 son).....III 377
 Railroads, organization of,
 (George T. Sampson).....IV 367
 Rights of, decision of, Chief
 Justice Taney.....II 71
 (See also trust companies).....
 Correspondence schools.....
 (See education).....
 Corruption.....
 (J. W. Folk).....X 307
 Bribery evils.....X 311
 Causes of official.....X 302
 Civic officials.....II 122
 Cure of official.....X 305
 Machine in cities, the.....II 430
 Nomination by popular vote.....II 392
 Political, following civil service
 act.....II 407
 Corundum.....VI 327
 Deposits.....VI 437
 Emeralds.....VI 330
 In U. S.....VI 327
 Mining of.....VI 328
 North Carolina mines.....VI 328
 Properties of.....VI 327
 Topaz.....VI 330
 Cos, General Soldier.....IX 41
 Countryman, Wm. A.....
 Watches.....VII 351
 Cotton.....
 American cotton belt.....V 110
 Area and production.....V 6
 Brazil and.....V 140
 Buyers of American.....V 143
 By-products.....V 113
 Calico and.....V 142
 China as buyer of.....IV 115
 Civil war, and the.....V 108
 Colonies, in the.....V 107
 Consumption, general increase
 in.....V 142
 Consumption, and wool.....V 136
 World's.....V 144
 World's, 1870-1900.....V 136
 Crop, comparative value of.....V 114
 Crops, first American.....V 21
 Crops, other, and.....V 12
 Cuba and.....IV 14
 Culture of, in west, general effect
 of.....III 22
 Discrimination, freight, reme-
 died.....III 215
 Egyptian.....V 142
 Egyptian production.....V 141
 European supply, early.....V 140
 Cotton continued.....
 Exports, 1870-1904.....V 143
 Exports of raw.....V 31
 Farmers, character of.....V 111
 Flax consumption, and.....V 137
 Foreign trade in.....IV 13
 Future demand for, (J. L.
 Watkins).....V 135
 Future of American (J. L. Watkins).....V 135
 Future U. S. fields.....V 146
 Georgia, introduction of, into.....III 20
 Gin, effect of the.....VII 272
 Influence of.....V 109
 Growth and exports.....V 108
 History.....V 106
 Early.....V 129
 Horsepower in, mills.....VII 214
 India and.....V 110
 Indian exports.....V 141
 Industry, in the west, early.....III 18
 Japan, mills of, a menace.....II 261
 Linen and wool substitute.....V 138
 Decline of.....V 137
 Loom inventors, English.....V 139
 Machinery, (D. C. Roper).....V 129
 Mill, first American.....V 108
 Oriental industry, changes in.....V 141
 Oriental trade.....IV 9
 Other fabrics, and.....V 136
 Peru, and.....V 107
 Philippine islands and.....IV 14
 Price and crop values.....V 6
 Prices, range of.....V 103
 Production, American and
 world's compared.....III 2
 Production, recent.....III 374
 Production since 1850.....V 30
 Rise of in U. S.....V 140
 Russia and Egypt.....V 145
 Russian production.....V 143
 Selection, artificial.....V 411
 Silk, a substitute for.....V 138
 Converted into.....V 139
 South American trade.....IV 8
 Manufactures in.....III 175, V 113
 Mills in the.....IV 62
 (Speed, John Gilmer).....V 106
 States, cotton, record of the.....V 110
 Supply, U. S. world's.....V 142
 Varieties of.....V 112
 Weaving of, first.....V 106
 West Indies, indigenous to.....V 107
 Western hemisphere and.....V 107
 Whitney's invention.....V 109
 Wool, decline of.....V 137
 World dependence on U. S.....V 144-5
 Cotton machinery.....
 (Daniel C. Roper).....V 129
 Bale press inventions.....V 133
 Bale pressing.....V 132
 Capacity of new and old plants.....V 131
 Gin, effects of.....V 132
 Ginnery, a modern.....V 131

- Cotton machinery—Continued.
 History.....V 129
 Lint, preparing.....V 133
 Cotton seed.....V 115
 Allied industries.....V 124
 Appreciation of.....V 35
 By-products.....V 119
 "Cake".....V 120
 "Cake," value of.....V 121
 Capital invested.....V 123
 Chemical analysis.....V 120
 Consumption, American.....V 126
 Consumption, foreign and American.....V 127
 Control of, American.....V 125
 Distribution, geographical, of industry.....V 122
 Exports.....V 123
 Exports of products.....V 121
 Fertilizer.....V 123
 Food for cattle.....V 119
 Food, as human.....V 118
 Foreign buyers, special, of.....V 126
 Growth of industry.....V 116
 History, early.....V 115-116
 Hulls, value of.....V 120
 Industry, C. M. Daugherty.....V 118
 Abroad.....V 125
 Oil a substitute for lard.....V 118
 Oil, manufacture of.....V 120
 Percentage of crop utilized.....V 124
 Products of, uses of.....V 117
 Stability of industry.....V 123
 Statistics of industry.....V 122
 Wages in industry of.....V 123
 Cows (see dairying).....
 Courtright, Mortimer W.....
 Telegraphs, on recent progress of.....IV 480
 Court, Supreme.....
 American System of, the, and what it accomplishes, (Simeon E. Baldwin).....II 76
 Constitution, and members of, in.....II 62, 91
 Sugar trust decision.....III 208
 Countryman, Wm. A.....
 Watchmaking.....VII 351
 Crampton, Charlotte.....I 309
 Crawford, Marion.....I 365
 Cream (see dairying).....
 Creelman, James.....
 New York's subways.....IV 451
 Crime.....
 Jails, schools for.....X 256
 Legal aspect of, in cities, in state, in nation.....II 109
 Lynchings.....X 134
 Minor, too severely punished.....X 256
 Negroes and.....X 133
 Pauperism, percentage of, to crime.....X 137
 Crime—Continued.
 Prisons, good done by.....X 260
 purpose of.....X 258
 Races and.....X 134
 Railroads and.....IV 245
 Reformatory methods, evolution of, (L. D. Drake).....X 262
 Statistics of in Chicago and Illinois.....II 109
 (See also cities).....
 Criminals.....
 Manual training and.....VIII 424
 Normal men and.....X 41
 Crockard, Frank H.....
 Blast furnaces.....VI 87
 Crocker, F. B.....
 Advantages of electric motive power.....VII 228
 Crops.....
 Value of.....III 480
 (See also agriculture, farmers)..
 Crothers, Thomas Davidson.....
 Drunkenness.....X 176
 Crown Point horror.....VI 21
 Crowell, Jno. Franklin.....
 American primacy in iron and steel.....VI 112
 Shipbuilding, present and future of American.....IV 129
 Crosat, Antoine.....
 Louisiana charter granted.....II 268
 Crozier, Alfred O.....
 Expansion of organized charity.....X 18
 Cruger, Mrs. Van Rensselaer.....I 366
 Cruisers (see navy, the).....
 Crystal, rock.....VI 339
 Cuba.....
 American, machinery, in.....VII 201
 As means to Latin trade.....IV 63
 Cause of Spanish war.....IX 65
 Charities.....II 309
 Commerce of.....II 311
 Cotton and.....IV 14
 Death rate, changes in.....II 304
 Education.....II 306
 Improved in.....II 305
 Foreign policy, effect of on.....II 127
 Foreign relations and.....II 199
 Hospitals.....II 310
 Industry of, revived.....II 307
 Prisons.....II 306
 Railroads.....II 310
 Rations distributed to poor of.....II 303
 Rights of.....II 202
 Sanitation.....II 303
 Soldiers, relief of Cuban.....II 303
 Spain notified to vacate.....II 200
 Tariff reduced.....II 308
 Tobacco and sugar.....II 307
 What U. S. has done for, (C. R. Edwards).....II 302

- Culture, physical.....
 Need of, education.....X 51
 Currants.....
 First American.....V 245
 Currency.....
 Philippine Island.....II 293
 (See also finance)
 Cushman, Charlotte.....I 309
 Cutlery.....
 Workmen, American, and.....VIII 15
 Cutter, Charles Ammi, The Develop-
 ment of Public Libraries.....X 275
 Cyanides.....
 Process in mining.....VI 227
 (See also finance)
 Cyclones (see weather, relief)....
 Cushing, William B.....
 Feat of.....IX 261
 Curtiss, George B.....
 Tariff.....II 212

D

- Da Costa, Dr.....
 Researches of.....VII 420
 Daft, Leo, electrician.....VII 139
 Dairies.....
 Adulteration of products.....X 294
 Dairy products.....
 Value of.....V 29
 Dairying (H. E. Alvord).....V 194
 Associated system of U. S.....V 195
 Babcock test, influence of.....V 199
 Butter and cream, ratio of.....V 202
 Machinery, new.....V 200
 Package varieties.....V 200
 Prices.....V 201
 Prints and rolls.....V 201
 Statistics.....V 200
 Casein, manufacture of.....V 203
 Value and uses of.....V 204
 Cheese statistics.....V 204
 Consumption of dairy products
 in U. S.....V 207
 Co-operation in, early.....V 196
 Co-operation, failure of.....V 198
 Cream gathering.....V 198
 Gathering, statistics of.....V 198
 Sales, statistics of.....V 203
 Separators statistics.....V 199
 Separators.....V 198
 Exports.....V 208
 Early.....V 196
 History, early.....V 194
 Increase of industry in U. S.....V 194
 In U. S., early.....V 196
 Imports.....V 207-8
 Milk, condensed.....V 205
 Condensed, statistics.....V 206
 Condensed, value of.....V 206
 Consumption.....V 207
 Production and prices.....V 207
 Skim, sales.....V 203

- Dairying—Continued.
 New England, in.....V 201
 Products, value of.....V 195
 Statistics for 1900.....V 195
 Whey, production and value of.....V 205
 Dakota.....
 Territory of formed.....II 274
 Dakotas the.....
 Railroads, North and South
 Dakota helped by.....IV 211
 Dalton, John, physician.....VII 419
 Daly, Augustin.....I 312
 Danford, Ebeneser.....V 96
 Daniels, George H.....
 Railroad Employees.....VIII 324
 Railroads in American commer-
 cial growth.....IV 199
 Danville, Ill.....
 Home for soldiers at.....IX 428
 Dartmouth college.....
 Case.....II 203
 Charter case, legality of.....II 101
 Thayer school.....VII 302
 Webster, in charter case of.....II 102
 Daugherty, Charles M.....
 Cotton seed industry.....V 115
 Davenport, Thomas, electrician.....VII 127
 Davidson, John Wynn.....
 Sword of.....IX 398
 Davis, Cushman K.....
 Trusts, prophecy of, concerning.....III 169
 Davis, Hayne.....
 Declaration of Independence.....II 26
 Davis, Jefferson.....
 Western railroads surveyed by.....IV 273
 Davis, N. S., physician.....VII 417
 Dawson Philip.....
 American steam engineering.....VII 278
 Day, David T.....
 Platinum.....VI 297
 Dayton, Ohio.....
 Soldiers' home at.....IX 415
 De (For French names see the
 patronymics).....
 Deaf mutes.....
 Care of.....X 158
 Helen Keller.....X 159
 Dearborn, Henry, soldier.....IX 3
 Death.....
 Risks, insurance.....III 454
 Death Valley.....
 Borax in.....VI 415
 De Bower Edward W.....
 The American salesman.....IV 506
 De Bower, Herbert Francis.....
 Building and loan associations.....X 226
 Debt, national.....
 Industry after 1812 effect on.....III 30
 Paid in 1832.....III 32
 Since 1898.....III 392

- Decatur, Stephen.....
 Before Tripoli.....IX 255
 Career of.....IX 255
 Naval officer.....IX 35
 Sword taken by.....IX 397
- Declaration of Independence.....
 (Ida M. Tarbell).....II 10
 Adams, John.....II 16
 Brewer, David J.....II 108
 Government, confided to the.....II 24
 Jefferson, written by.....II 14
 Outcome of.....II 26
 Preserving the document.....II 24
 Riots caused by.....II 22
 Severely criticised by the
 congress.....II 18
 Signing of.....II 21
- Deering, William.....
 Harvesters of.....V 91
- Defectives.....
 Care of.....X 157
- De Forest, Robert U.....
 Tenement house regulation.....X 193
- Degeneration.....
 Drunkenness and.....X 176
- Deidesheimer, Phillip, mining engineer VI 24
- Delaware.....
 Vote of, on American independ-
 ence.....II 13
- Demagogues.....
 Labor and.....IV 516
- Democracy.....
 American, a farce.....I 247
 Individualistic.....I 96
 Australian, widest.....I 4
 Education and, (Vida L. Scudder).....I 245
 Energy, incentive to.....I 53
 Foundation of.....I 4
 Fundament of.....II 162
 Immigrants and.....I 3
 Isolation of working classes.....I 245
 Typical American.....I 7
- Democratic party.....
 Resolution to fix majority of
 Supreme court.....II 86
 Tariff and.....II 332
- Dennison, A. L.....
 Watch industry and.....VII 354
- Densmore, James, typewriter maker.....VII 367
- Dentistry.....
 Association, first dental.....VII 440
 Associations of, American.....VII 440
 Education, modern.....VII 439
 History, early.....VII 437
 Improvement in instruments.....VII 442
 Legislation upon.....VII 443
 Literature, American dental.....VII 441
 Progress of in U. S.....VII 437
 School of, first.....VII 438
 (See also medicine and surgery)
- Department stores.....
 Consumer, help the.....III 96
 (See also trusts, industry).....
- Depoele, van, Charles J., electrician.....VII 139
- Detmold, Wm. surgeon.....VII 432
- Devine Edward T.....
 Emergency relief in disasters.....X 77
- Dewers W. P., physician.....VII 414
- Dewey, George.....IX 262
 Manila bay, at.....IX 242
 Sword of.....IX 393
- Diamonds.....
 Blatchley's list of.....VI 327
 Found in U. S.....VI 325
 Mining of, in Africa.....VI 27
 U. S. geological deposits, and.....VI 326
- Dickinson, John.....
 Opponent of colonial freedom.....II 12
- Dingley law.....II 337
 Reciprocity and.....II 381
- Diplomacy American.....
 (John Bassett Moore).....II 158
 (John Hay).....II 144
 (Richard Olney).....II 124
- Agreements other than treaties
 (Charles C. Hyde).....II 216
- Alabama settlement,
 claims, terms of.....II 165
- Arbitration, in international.....II 173
- Blockade, forces definition of
 valid.....II 167
- Cable, support of Pacific.....II 146
- Clayton-Bulwer treaty.....II 164
- Democracy, fundamental.....II 162
- Diplomats, character of Ameri-
 can.....II 214
- Expansion, territorial, and.....II 173
- Extradition.....II 173
- Foreign born citizens, rights
 of.....II 171
- France and neutral rights.....II 166
- Frankness of.....II 161
- French alliance, rejection of
 proposed in 1793.....II 159
- French army commissions pro-
 hibited.....II 162
- French Revolution and.....II 161
- Government, hindered by form
 of.....II 213
- Growth of American.....II 124
- Hay-Pauncefote treaty.....II 168
- Holy Alliance and.....II 169
- Hague convention, terms of.....II 229
- Isthmian canal, and.....II 228
 Freedom of, declared by C-ay.....II 166
 History of.....II 229
- Lawyers, American, in.....II 213
- McKinley and.....II 147
- Military policy of U. S.,
 (Emory Upton).....IX 118
- Monroe doctrine.....II 145
- Monroe doctrine, declaration of.....II 170

Diplomacy—Continued.

- Napoleon's wars, defines neutrality in.....II 163
 Napoleonic wars.....II 162
 Need of enlarged agencies.....II 149
 Neutral rights, Great Britain and.....II 166
 Struggle for.....II 165
 Neutrality law, first.....II 164
 N. W. territories barred from colonization.....II 170
 Orient, policy in the.....II 171
 Pacific Islands.....II 146
 Prussia, early treaty with.....II 160
 Reciprocity, (John Hay).....II 146
 Rivers, free navigation of international.....II 168
 Seas, freedom of, established by.....II 168
 Senate a check on.....II 206
 Suez canal treaty.....II 168
 Supreme court, members of, in.....II 91
 Treaties with France, early.....II 159
 Triumphs of American, (John Hay).....II 144
 United States leader in neutrality laws.....II 164
 Disarmament, American.....II 155
 Disasters.....
 Relief in, (E. T. Devine).....X 77
 Discrimination (see railroads, trusts)
 Disease (see health and immigration)
 Dispensaries.....X 37
 Dodge, W. O.....
 Invention and American wealth.....VII 267
 Dogs.....
 Farm animals.....V 47
 Dolbear, Professor.....
 Telephone, inventor of.....VII 138
 Dolge, Alfred.....
 Wage scheme of.....VIII 292
 Douglass, James.....
 Transcontinental lines, American, IV 270
 Dolphin (U. S. S.).....IX 292
 Dorsey, Owen.....
 Rake invention of.....V 88
 Drainage.....
 Canal, Chicago, and American machinery.....VII 204
 (See also canals.)
 Drake, Lyman D.....
 Reformatory methods.....X 262
 Drake, Rodman.....I 356
 Drama (see theaters)
 Dred Scott case.....
 Chief Justice Taney on.....II 85
 Opinion of Justice Campbell.....II 87
 Drew, Walter.....
 Closed shop contracts.....VIII 215
 The law and closed shops.....VIII 215
 Draws, the, players.....I 315
 Drills.....
 Electric, in mining.....VI 44-45
 Metal working.....VI 285

Drills—Continued.

- Pneumatic.....VII 252
 (See also mining)
 Drugs.....
 Adulteration of.....X 290
 (See also adulteration).
 Drunkenness.....
 Charity, pauperism, and.....X 16
 Crime and.....X 134
 Cures for.....X 186
 Decline of.....X 178
 Drink problem (Thomas Davidson Crothers).....X 179
 Evolution of.....X 179
 History of.....X 177
 Hospitals for inebriates.....X 187
 Inherited.....X 180
 Insanity, as.....X 179
 Jews and.....X 63
 Marriage and.....X 181
 Moral feeling and.....X 185
 Nutrition and.....X 182
 Prevalence of.....X 176
 Types of.....X 178
 Duane, James.....
 Debate on colonial freedom.....II 13
 Duhuqua, gunboat.....IX 304
 Dudley, Benj. Winslow, surgeon.....VII 431
 Duffield, Hamilton P.....
 Adulteration of food and medicine.....X 288
 Duluth.....
 Wheat trade of.....V 157
 Dunbar, C. F., economist.....I 90
 Duncan, James.....
 Trade unions an influence for industrial peace.....VIII 178
 Dunderberg, the, iron clad.....IX 327
 Dunnite (see guns)
 Duntley, W. O.....
 Compressed air.....VII 246
 Durand, Edw. Dana, economist.....VIII 26
 Railroads, interurban.....IV 419
 Duties of Citizenship.....
 (David J. Brewer).....II 108
 Dutton, S. T.....
 Educational resources of the community.....I 69
 Dyes.....
 Discoveries in.....VII 31
 Dynamite (see guns)

E

- Earth, the.....
 Soils, geology of American.....V 1
 Economics.....
 American.....VIII 24
 Economy of production (see industry, trusts, production).....III 63
 Economy, political (see political economy)

- Edigerton, Charles E. economist.....VIII 26
- Edison, Thomas A.....
 Beginnings of incandescent
 lamp.....VII 194
 Duplex telegraph.....VII 132
 Electrician.....VII 131
 Methods of work.....VII 132
 Telephone, inventor of.....VII 175
- Education.....
 Achievement.....I 94
 Administration of American.....I 98
 American unique.....I 97
 American colleges, (N. M. But-
 ler).....I 154
 American reforms in, (C. W.
 Elliot).....I 89
 American school boy, the (L. H.
 Gulick).....I 125
 American universities, (E. H.
 Warfield).....I 185
 American university ideals,
 E. G. Hirsch.....I 197
 And commercial development,
 (H. J. Rogers).....III 300
 Armstrong, H. E., on.....I 125
 Attendance, percentage of.....I 268
 Catholic, must be.....I 240
 Child labor and.....I 104
 Church and.....I 71
 Cities and, congestion of.....I 130
 Citizenship and.....I 241
 Co-education, evil of.....I 126
 College requirements not uniform.....I 120
 Colleges private and public.....I 82
 Statistics of agricultural.....V 60
 Compulsory in U. S.....I 102
 Consanguinity of, and labor,
 (W. J. Tucker).....VIII 426
 Cooley's decision on higher.....I 84
 Corruption and.....I 101
 Crime and.....I 86
 Criminals and manual training.....VIII 424
 Cuba and.....II 306
 Cuban.....II 305
 Curricula, public school.....I 109
 Definition of.....I 69
 Democracy a farce.....I 247
 Democracy and, (Vida L. Scud-
 der).....I 245
 Dominant force.....I 70
 Effects of, early.....I 259
 Effeminizing of boys.....I 127
 Election of studies.....I 90
 Elementary, public.....I 83
 Environment and.....I 152
 Equality and.....I 96
 Europe and United States com-
 pared.....I 102
 Federal government, part of, in.....I 101
 Fire drill.....I 130
 For the whole people.....I 85
- Education—Continued.....
 Foreign prejudices.....I 129
 Freedom in studies.....I 80
 Future men and.....I 232
 Future of small colleges, (W. R.
 Harper).....I 154
 General land grant bill, terms of.....VII 364
 Georgia's system.....I 100
 German and American high
 schools compared.....I 110
 Gives high potential.....I 242
 Government and higher.....I 83
 Control.....I 78
 Graded schools.....I 108
 System of U. S.....I 82
 Gymnasiums, need of.....X 31
 Health and.....I 267
 Home and.....I 71
 Hostility to large institutions.....I 166
 Huntington, C. F., on.....I 249
 Independence, local, in.....I 99
 Industrial and technical training
 in popular, (H. S. Pritchett).....I 133
 Industrialism and.....I 233
 Industry and.....III 318-19
 Influence of.....I 73
 Inefficiency of general system.....I 269
 In U. S. early.....I 95
 Laboring classes, not sought
 by.....I 245
 Laboring men, for.....I 246
 Lands, value of national.....I 105
 Leo XIII and.....I 308
 Library and.....I 72
 Library, public school.....I 119
 Manual, training.....VIII 415
 Masses, elevating the, by.....I 252
 Mental, overestimated.....I 260
 Migration of students.....I 178
 Missouri Supreme court on.....I 85
 Money spent on.....VII 319
 Moral, must be.....I 244
 Morality and.....I 242
 Religion, and.....I 257
 Morals, public, raised by.....I 266
 Moseley report on.....I 125
 Museums.....I 73
 Music, teaching of.....I 254
 National life and.....X 54
 System.....I 98
 Nature study.....I 83
 New York system.....I 99-100
 Newspapers.....I 72
 Parental influence.....I 74
 Philanthropy, expenditures in
 Educational, (B. A. Woods).....I 264
 Organized (R. A. Woods).....X 50
 Porto Rican.....II 299
 Poverty and,.....I 75
 Precocity, American.....I 114
 Preparation for life.....I 123

Education—Continued.

- Principles of American, (N. M. Butler).....I 78
 Productive capacity and.....I 269, X 55
 Professional schools.....I 178
 Public duty in.....I 97
 Indispensable.....I 96
 Public school system, (R. E. Hughes).....I 95
 Punishment, corporal.....I 91
 Purpose of.....I 236
 Primary, of.....I 242
 Religion, and (A. T. Hadley).....I 257
 And colleges.....I 172
 And.....I 202
 Resources of the community, (S. T. Dutton).....I 69
 Classified.....I 70
 Roman Catholic universities, (J. F. Mulaney).....I 207
 School age, the.....I 123
 And.....I 71
 Curricula of high.....I 116
 Efficiency of public.....I 112
 Equipments of public.....I 107
 Private.....I 82
 Public.....I 82
 High.....I 118
 Technical.....I 121
 Pupil capacity of public.....I 107
 Sports in public.....I 128
 Unchartered.....I 82
 School buildings, character of
 U. S.....I 105
 Secondary, importance of.....I 120
 Public.....I 113
 Social.....X 52
 Question and.....I 206
 Rank in.....VIII 430
 Socialism and.....I 79
 Societies.....I 76
 State gifts to.....I 235
 State, purpose of the.....I 80
 Rights of the.....I 237
 States and cities, various.....I 101
 Statesmen, morals of.....I 238
 Systematic studies.....I 92
 Statistics, public school.....I 109
 Talent saving and.....I 268
 Taxation and.....I 86
 Teacher, training the.....I 111-12
 Teachers, esprit of American.....I 111
 Heroism of college.....I 167
 Percentage of men.....I 127
 Residence.....I 82
 Weakness of women.....I 126
 Text-books, public school.....I 108
 The educated man and the State (H. S. Pritchett).....I 234
 Types in U. S.....I 82
 Universality of.....I 152

Education—Continued.

- Universities and industry.....III 319
 University education for business men, (S. N. Patten).....I 218
 University of Michigan, pioneer in VII 302
 Vocations and.....I 267, X 53
 Webster, Daniel on.....I 86, 96
 Working classes and.....I 268, X 54
 Separation of.....I 245
 Working men, lectures to.....I 247
 (See also architecture, the blind, colleges, dentistry, libraries, medicine and surgery, Roman Catholic, social question).....
 Education, Agricultural.....
 Farmer, influence on.....V 26
 Need of the, for.....V 406
 Federation of rural social forces, (K. L. Butterfield).....V 354
 Kinds needed.....V 421
 South the, and.....V 385
 Wilson, James.....V 406
 Education, Technical.....
 Ability and opportunity.....VII 204
 American, early.....VII 297
 Arguments for.....VIII 429
 Berlin.....I 138
 Brooklyn polytechnic.....VII 302
 Civil war, after the.....I 151
 Class system, benefits of.....I 135
 Columbia school of mines.....VII 302
 Culture, general, and.....VII 297
 Curriculum of manual training schools.....VIII 422
 Definition of training.....I 134
 Demand for trained workers.....I 144
 Democracy and.....I 29
 Education for engineer, proper.....VII 292
 General and special.....I 136
 German and American compared.....I 141
 German schools and wage earners.....I 145
 Graduate courses.....VII 310
 Graduates, standing of.....VII 312
 History of, ancient.....VII 290
 Laboratory work.....VII 309
 Land grant bill.....VII 303
 Lawrence scientific school.....VII 300
 Livelihood and.....I 135
 Manual training school, curriculum of St. Louis.....VIII 421
 Definition of.....VIII 419
 Manual training in public schools (H. E. Back).....VIII 419
 Origin of.....VIII 420
 Manual training schools, varieties of schools.....VIII 421
 Massachusetts institute of technology.....VII 302
 Moseley commission, on.....VIII 12
 National system needed.....I 147

Education, technical—Continued.

- Navy enlistment and.....I 149
 Effect of.....I 150
 Numbers available for.....I 133-4
 Organized labor and.....I 147
 Progress of engineering, (R. H. Fernald).....VII 290
 Public system, benefits of a.....I 148
 Rensselaer institute.....VII 298
 Curriculum at.....VII 299
 Results of.....VII 313
 Schools and fees.....VII 311
 Correspondence.....I 143
 Sheffield school.....VII 301
 Specialism, evils in.....VII 295
 Specialists as teachers.....I 161
 Spread of, plans for.....I 137
 Statistics of.....VII 306
 Stevens institute.....VII 303
 Success of manual training school.....VIII 423
 Thayer school.....VII 302
 Training manual, early history of.....VII 298
 Washington and Lee university.....VII 303
 West Point.....VII 299
 Early at.....VII 297
 Edwards, Clarence R.....II 302
 Cuba.....II 302
 Edwards, Jonathan.....I 351
 Edwards, William M.....X 104
 Provision for the insane.....X 104
 Eggs.....V 30
 Production.....V 30
 Egypt.....V 141
 Cotton production.....V 141
 Culture in.....V 145
 Elberfeld.....X 3
 Charity system.....X 3
 Electric power.....III 349
 Cheapness of.....III 349
 Limit to big transmission.....III 354
 Organization easy.....III 353
 Small concerns, feasible for.....III 351
 Electrical invention (see invention)..
 Electricity.....VII 124
 American progress unrecognized.....VII 124
 Arc lights, development of.....VII 128
 Arc lamps, enclosed.....VII 161
 Invention of.....VII 166
 Alternating current and electric lighting.....VII 160
 Aluminum, producing.....VII 144
 Brush, C. F on.....VII 138
 Davenport.....VII 127
 Distribution, economy of power, (Louis Bell).....III 345
 Dynamo, effect of.....VII 141
 Edison's bamboo experiments.....VII 126
 Carbon experiments.....VII 124
 Lamp, success of.....VII 127
 Edison's work.....VII 121
 Electric light, (Louis Bell).....VII 144

Electricity—Continued.

- Electricians, eminent American.....VII 137
 Electrolysis.....VII 143
 Defects of.....VII 146
 Diaphragm in.....VII 147
 Electroplating.....VII 148
 Energy, production of.....VII 142
 Farmer's magnet.....VII 127
 Field's inventions.....VII 139
 Franklin's work.....VII 109
 Furnace, the electric.....VII 143
 Gases, production of, by.....VII 151
 Gun-firing by.....IX 389
 Guns and.....IX 314
 Henry's work.....VII 114
 Hewitt, Biographical sketch of P. C.....VII 198
 Hewitt lamp, use of.....VII 191
 Hewitt's conversion of alternating into direct currents.....VII 184
 Interrupter.....VII 186
 Inventions, (Ray S. Baker).....VII 183
 Vacuum lamp.....VII 183
 History in U. S., early.....VII 140
 History of, in U. S., (G. H. Stockbridge).....VII 109
 Incandescent lamp, invention of.....VII 157
 Success of.....VII 161
 Plants, number of.....VII 158
 Industrial electro-chemistry, (E. F. Roerber).....VII 140
 Invention of lamps, (T. A. Edison).....VII 194
 Lighting, early.....VII 154
 Newera of electric.....VII 159
 Martin, T. C.....VI 37
 Ore reduction by.....VII 150
 Page's inventions.....VII 124
 Merits.....VII 126
 Railroads, electric.....VII 139
 Refining, electro.....VII 148
 Science of, (see physics).....
 Storage batteries, future of.....VII 152
 Sturgeon's work.....VII 114
 Telegraph, first electro-magnetic.....VII 115
 Telephone, invention of, (A. G. Bell).....VII 171
 Tesla's earth currents.....VII 163
 Thomson's work.....VII 133
 Undulatory theory, Bell's.....VII 174
 War ships.....IX 283
 Weston's inventions.....VII 138
 Wireless, (Nikola Tesla).....VII 163
 Wireless stations, Tesla's plans for.....VII 165
 (See also mining, motive power, Niagara, railroads, telegraphs, and the telephone)..
 Electrolysis (see electricity).....
 Electroplating (see electricity).....

Elevators, grain.....
 Capacity.....IV 164
 Capacity, of, increasing.....IV 166
 Kinds of.....IV 164
 Machinery of.....IV 167
 Modern, (Day Allen Willey).....IV 163
 Motive power of.....IV 168
 Steel.....IV 167
 Storage.....IV 164
 Operation of.....IV 166
 Structure of.....IV 165
 Transfer.....IV 164
 Transferring.....IV 168
 (See also wheat).....
 Elliot, Charles W.....
 American reforms in education.....I 89
 Reformer, as educational.....I 192
 Elliott, Jesse Duncan.....
 Sword of.....IX 394
 Ellis, Alexander J.....
 And A. G. Bell.....VII 171
 Elmer, Jonathan, American physician.....VII 407
 Elwell, F. E.....
 American art.....I 331
 Elwood, Charles, sociologist.....VII 101
 Ely, Richard T.....
 Government investigation of
 labor.....VIII 24
 Ely, William T.....
 Political economist.....VII 95
 Emeralds.....I 328
 Emerson, R. W.....I 358
 Emery.....VI 436
 Emory, Frederick.....
 Competition, foreign view of
 American.....IV 51
 Foreign trade of U. S.....IV 110
 Engines, gas.....
 Natural.....VI 391
 Number of in U. S.....VII 216
 Engines, turbine (see turbine engines)
 (See also engineering).....
 Engineering.....
 Accounts, daily, the curve of.....III 261
 Allis-Chalmers Milwaukee plant.....VII 283
 American and European plants.....VII 282
 American steam, (Philip Daw-
 son).....VII 278
 Boston railroad plant.....VII 279
 Bridge building and.....IV 402
 Business and.....III 258
 Capital, relations of to.....VIII 360
 Centuries progress in (R. H.
 Fernald).....VII 290
 Commerce, its uses in.....III 259
 Continental engines.....VII 286
 Cooling towers.....VII 288
 Development of steam engines.....VII 279
 Engineers as an employer.....III 262
 History of, early.....VII 290
 Horizontal and vertical engines.....VII 286
 Industrial works, in (W. D. Ennis) III 257

Engineering—Continued.
 Machinery, and economy of.....III 260
 Manufacture an engineering
 proposition.....III 259
 Marine engines, American.....VII 284
 Mechanical, in U. S.....VI 446
 Mistakes, prevent business.....III 261
 New York metropolitan railroad
 plant.....VII 280
 Railroads, routes of western.....IV 274
 Societies helpful to business.....III 262
 Success, records in business.....III 260
 Superheated steam.....VII 288
 United States navy.....IX 341
 (See also education, technical)..
 England.....
 American heritage from.....II 446
 Commerce, and early American.....IV 67
 Lawyers in.....II 100
 Shipbuilding, influence on Amer-
 ican.....IV 129
 Tobacco culture prohibited in.....IV 73
 Ennis, William D.....
 Engineering in industrial works.....III 257
 Entomology.....
 Debt to, world's.....VII 33
 Equitable Life company.....III 461
 Equitable Life Insurance Co.....
 An exemplar.....III 471
 Ericsson, John.....
 Railroads and.....IV 234
 Erie railroad.....
 Planned.....III 26
 Ether.....VII 427
 Discovery of.....VII 414
 Europe, introduced into.....VII 416
 Morton, used by W. T. G.....VII 415
 Ethnology.....
 Governments work in.....VII 42
 Europe.....
 States of, modeled after Amer-
 ican union.....II 26
 Eustis, William.....
 War of 1812 and.....IX 28
 Evans, Oliver.....
 Railroads and.....IV 235
 Eve, Paul Fitzsimmons.....VII 431
 Expansion, American commercial...
 (O. P. Austin).....IV 33
 Anglo-French treaty 1763.....II 268
 Area and population 1790 to
 1900.....II 267
 Commercial, assured.....IV 61
 Diplomacy, and American.....II 173
 Early California.....II 282
 Foreign trade and.....IV 514
 Hawaii, annexation of.....II 218
 Louisiana purchased by U. S.....II 270
 Louisiana purchase territory,
 present production of.....II 275
 Terms of.....II 272
 Successive political divisions of.....II 272

Expansion—Continued.

- Mexican territory, political division of.....II 285
- Population of in 1850.....II 285
- Mexico, statistics land ceded by.....II 286
- Mississippi, French explorers of.....II 267
- New Mexico and California acquisition of.....II 283
- Oregon acquired.....II 284
- de Pinedo, Navarez, and DeSoto visit of, to Mississippi.....II 267
- Purchases, table of.....II 266
- Territorial (O. P. Austin).....II 265
- Territory claimed by colonies.....II 265
- Texas annexation of.....II 218, II 279
- History of.....II 277
- Expansion through reciprocity.....(John Ball Osborne).....II 375
- Exploration.....
 - Explorers American, early.....IV 270
 - Lewis and Clark.....IV 272
 - Lieutenant Pike.....IV 273
- Explosives (see guns).....
- Exports and imports.....
 - American exports to the world.....IV 41
 - Changes in American, relative.....IV 46
 - Exports 1820-30.....IV 105
 - In 1904.....IV 13
 - Fruit export trade.....V 250
 - Growth, slow, of American exports.....IV 10
 - Increase of American exports.....IV 34-5
 - Imports.....IV 43
 - Increase of.....IV 4
 - Under early tariff.....II 317
 - Iron and steel.....IV 51
 - Manufactures exported in 1904.....IV 112
 - Exports, percentage of agricultural.....V 391
 - Value of agricultural exports.....V 9, 14
- Expositions.....
 - Education, industrial, at Paris.....III 306

F

- Factories.....
 - Age limitation of workers.....VIII 71
 - As social element, (C. D. Wright).....VIII 338
 - Bathing and sanitation.....VIII 329
 - Child labor, acts provoked by.....VIII 73
 - Cleveland Cliffs Iron Co.....VIII 335
 - Congress, and powers of.....VIII 81
 - Courts and factory legislation (G. W. Alger).....VIII 46
 - Drama of furnace, forge, and shop, (Day Allen Willey).....VI 264
 - Educational influence of.....VIII 341
 - Factory, machine shop, and mine, (C. B. Goring).....VIII 326
 - Girls, nationality of, in.....VIII 339
 - White, in southern.....VIII 340

Factories—Continued.

- Hopedale, Mass.....VIII 333
- Inspection of.....VIII 76
- Growth of.....VIII 72
- Laws, constitutionality of.....VIII 87
- Development of.....VIII 74
- Enforcing laws.....VIII 76
- English, on.....VIII 50
- Growth of.....VIII 88
- Illinois, on.....VIII 52
- Interstate.....VIII 79
- New York.....VIII 51
- Opposition to.....VIII 86
- Purpose of.....VIII 46
- Supreme court on.....VIII 49
- Legislation, (G. W. Alger).....VIII 46
- Legislation and inspection, (Sara S. Whittelsey).....VIII 70
- Legislation, causes of.....VIII 72
- Theory of.....VIII 47
- Lowell, early.....VIII 338
- Ludlow, Mass.....VIII 332
- Morals of employees.....VIII 342
- National Cash Register Co.....VIII 336
- Peace Dale, R. I.....VIII 334
- Plan, of Nelson's, N. O.....VIII 334
- Profit sharing, (N. P. Gilman).....VIII 302
- Ruralization of.....VIII 330
- Skill, encourage.....VIII 343
- Social life, have raised.....VIII 341
- Sweatshops not due to.....VIII 342
- Towns, building.....VIII 331
- Women in early.....VIII 339
- Workers, comforts.....VIII 320
- (See also child labor, labor, workmen, industrial commission).
- Fairbanks, Charles W.....
 - American political policies.....II 392
- Family, the (see woman).....
- Famine (see relief).....
- Faraday, Michael.....
 - Discoveries of.....VII 28
- Farms.....
 - American, famous.....V 329
 - Dairymple.....V 331
 - Federation of social forces, (K. L. Butterfield).....V 354
 - Intensive farming, (B. T. Gallo-way).....V 332
 - Largest in world, (John H. Baffery).....V 324
 - Miller, farm.....V 324
 - Annual cost of.....V 325
 - Surplus, national farm (George K. Holmes).....V 359
 - Traction engines on.....V 330
 - Twentieth century, (E. P. Powell).....V 431
 - (See also agriculture).....
- Farmer, Moses G.....
 - Electric light and.....VII 127
 - Electrician.....VII 127

- Farmers**.....V
- Acreage values.....V 40
- American (James Wilson).....V 12
- Character of.....V 55
- Book readers, as.....V 63
- Bank deposits of.....V 16
- Banking, number of.....V 16
- Boards of trade, and.....V 27
- Colleges, statistics of agricul-
 tural.....V 60
- Cotton, character of.....V 111
- Crops on record, first American...V 21
- Total value of.....V 14
- Wealth of, in.....V 12
- Defects in work of.....V 65
- Department of agriculture, debt
 to.....V 67
- Education, influence of.....V 26
- Farm property, value of.....V 40
- First American, (G. K. Holmes)....V 18
- Government help.....V 27
- Indifference of, to.....V 59
- Indiana, early American, as.....V 18
- Intellectual, development of.....V 62
- Improvement of, evidence
 of.....V 64
- Methods of, improvident.....V 56
- New England, early.....V 20
- Number of, comparative.....V 99
- Increase in.....V 28
- Organizations of.....V 26
- Progress, not factors in.....V 54
- Property, appreciation of.....V 15
- Revenue of, gross.....V 49
- Societies, growth of.....V 62
- Thinkers, becoming.....V 56
- Tobacco, early Georgia.....V 19
- Virginia, poverty of early.....V 19
- Value of farms.....V 29
- Wealth, diffusion of among.....V 17
- Increasing.....V 12
- (See also agriculture).....
- (See also various cereals and
 farm products).....
- Farragut, David**.....IX 260
- Career of.....IX 260
- Farson, John**.....IV 500
- Automobiles in America.....IV 500
- Fashions**.....VII 203
- Paris, American fashion plates
 in.....VII 203
- Faucett, H. W.**.....VI 230
- Cyanide, patent of.....VI 230
- Fawcett, Edgar, novelist**.....I 366
- Fawcett, Waldon**.....VI 165
- Center of the world of steel.....VI 165
- Handling raw mining material....VI 30
- Iron mining.....VI 80
- Utilities for handling raw min-
 ing material.....VI 30
- Federation, American, of Labor**.....VIII 222
- Permanence of.....VIII 222
- (See specific names, also labor
 and trades unions).....
- Fenger, Christian, surgeon**.....VII 433
- Fernow, B. E.**.....III 355
- American lumber.....III 355
- Fertilizers (see phosphate rock)**.....
- Field, Cyrus W.**.....VII 130
- Originator of cables.....VII 130
- (See telegraphs submarine).....
- Field, Hollis W.**.....X 88
- Building of hospitals.....X 88
- Luther Burbank, the wizard of
 the garden.....VII 105
- Management of strikes.....VIII 168
- Field, Melville**.....II 74
- Views of, on the Supreme court....II 74
- Field, Stephen D., electrician**.....VII 139
- Figs**.....V 246
- American.....V 246
- Filipinos**.....VIII 251
- Laborers.....VIII 251
- Missouri's resolution of sym-
 pathy.....II 207
- Mutinies of.....IX 77
- Ricarte's insurrection.....IX 78
- Rights of.....II 295
- Under constitution.....II 202
- (See also army, the).....
- Finance**.....III 377
- American, (W. R. Lawson).....III 377
- American early and government
 aid.....III 401
- Strength and weakness of,
 (E. H. Roberts).....III 392
- Anglo-American loans early.....III 34
- Bank notes criticized.....III 395
- In circulation.....III 395
- Issues of.....III 395
- Bank of U. S. chartered.....III 35
- Of North America chartered....III 35
- Banking, concentration of, in
 U. S., (C. J. Bullock).....III 411
- Banks and state control.....III 45
- Early American.....III 10
- Hamilton's and Jackson's dis-
 like for.....III 404
- Barings and Stephen Girard.....III 405
- Burr, Aaron, in.....III 406
- Capital in U. S., early foreign....III 31
- Chase, Salmon P.....III 404
- Circulation in U. S., per capita....III 398
- Corporate factors of, (W. R.
 Lawson).....III 377
- Crop movements, treasury hold-
 ings and.....III 398
- Values.....III 480
- Depression of 1902.....III 476
- Debt, national, since 1898.....III 392
- Early American financiers, (G. A.
 Townsend).....III 401

Finance—Continued.

Europe, influence of America on.....	IV	59
Financial future of U. S., (F. A. (Vanderlip)).....	III	475
Financiers.....		
Longevity of.....	III	405
Girard, Stephen.....	III	407
And the loan of 1814.....	III	409
Death of.....	III	410
Gold and other money in foreign countries.....	III	398
And silver money, increase of.....	III	397
Backbone of American money system.....	III	397
Bulk of, in banks and treasury.....	III	397
Excess of.....	III	398
Exports and imports from 1889 to 1904.....	III	399
In banks and treasury bulk of.....	III	397
Treasury.....	III	397
Production, world's.....	III	397
Reserve, notes and.....	III	393
To other currency, ratio of.....	III	398
Treasury, 1900 to 1905.....	III	393
Greenback, recent redemptions.....	III	393
History of.....	III	393
Hamilton, Alexander, in.....	III	402
Ideal system, an.....	III	392
Investment abroad, American.....	IV	47
London statistic on American.....	IV	60
McCulloch, Hugh, in.....	III	405
Money in U. S.....	III	477
National, sound.....	III	392
Paper money, fifth on.....	III	396
Promoter, work of the.....	III	231
Railroad earnings increase.....	III	478
Stocks, who owns.....	III	330
Railroads of.....	IV	223-4
Rothchilds' Heslans.....	III	406
Silver dollars, redemption of.....	III	394
In circulation.....	III	394
In treasury.....	III	394
Speculators and progress.....	III	277
Standard universal.....	III	399
Treasury, in.....	III	397
Trust companies, (W. P. Gest.).....	III	428
United States leads world in.....	IV	28
Notes, soundness of the.....	III	393
Wealth of U. S.....	III	477
World finance, American.....	III	396
(See also banking, speculation)...		
Financial.....		
Gold, American conservation of.....	III	397
Financiers.....		
Longevity of.....	III	405
Fire (see relief).....		
Alarms (see telegraphs)...		
Fires.....		
Tenement houses and.....	X	198

Firemen.....		
Duties of.....	X	223
Fire fighters, (John Campion).....	X	222
Heroes.....	X	222
Lives of.....	X	224
Motives of.....	X	224
(See also buildings, high).....		
Fiscal.....		
Expenditures from 1883-1889.....	II	408
Fish, Stuyvesant.....		
Development of American rail-ways.....	IV	234
Fisheries.....		
Supreme court in Behring sea cases.....	II	91
Fitch, John.....		
Steamboat, inventor of.....	IV	153
Fitz, Reginald, physician.....	VII	435
Fitzmorris, Charles C.....		
Heroes of the navy.....	IX	252
Romance of the steamboat.....	IV	152
Turbine engines.....	VII	254
Weapons of destruction.....	IX	356
Flax.....		
Area and production.....	V	7
Cotton consumption and.....	V	137
Crops, first American.....	V	21
Flint, Austin, physician.....	VII	419
Flint, Charles R.....		
Labor, intelligence and money.....	III	91
Floods (see relief).....		
Florida.....		
Louisiana, part of.....	II	272
Floriculture.....		
Commercial, (L. Thomas).....	V	363
(See also flowers).....		
Flour.....		
Exports.....	V	31
Horse power in mills.....	VII	214
Milling on agriculture, influence of.....	V	44
Minneapolis exports.....	III	363
Monopoly and railroads.....	IV	336
(See also commerce).....		
Flowers.....		
Area in cultivation and values.....	V	371
Capital needed for start.....	V	349
Crops, choice of.....	V	364
Floriculture, commercial, (Leroy Thomas).....	V	363
Fruits and.....	V	370
Glass roof area.....	V	366
Glass, uses of.....	V	366
Greenhouse, a modern.....	V	366
Investments in, amount of.....	V	371
Statistics of.....	V	367
Lily and tulip culture.....	V	369
Nurseries, number of.....	V	369
Ornamental purposes.....	V	370
Parks, public.....	V	371
Pot, flower, industry.....	V	366
Production and profits, statistics of.....	V	364

Flowers—Continued.

- Cost of.....V 364
- Statistics of.....V 368
- Profit in cut.....V 339
- Specializing in.....V 341
- Value of, grown.....V 369
- Violet culture.....V 368
- Fluorite.....VI 338
- Folk, Joseph W.....
 - As enforcer of law.....II 122
 - Reign of law.....X 307
- Food.....
 - Cotton seed products.....V 119
 - Exports of.....V 9
 - And production.....V 29-32
 - Consumers of U. S.....V 397
 - Future of supply.....V 10
 - (see also adulteration).....
- Food products.....
 - Trusts controlling, statistics of.....III 163-4
 - U. S. as food shipper.....IV 92
 - Largest producer of.....IV 35
 - West, products of.....III 365
 - (See also adulteration).....
- Foote, gunboat.....IX 300
- Forbes, J. D.....
 - Glacial theory and.....VII 51
- Ford, Alexander H.....
 - Triumph of American idea.....VII 198
- Ford, Henry James.....
 - Civil service reform.....II 406
- Ford, Paul Leicester.....I 368
- Foreign policy, American, growth of, ..
 - (Richard Olney).....II 124
 - Agencies, need of enlarged.....II 136
 - Asiatic empire, United States
 - an.....II 136
 - Asiatic powers, and.....II 138
 - Cuba, and.....II 127
 - Europe, unchanged as to.....II 139
 - Great Britain, alliance with.....II 142
 - Island possessions, increase of
 - through.....II 137
 - McKinley, President.....II 145
 - Napoleonic wars.....II 138
 - Orient, trade with.....II 140
 - Philippine Islands a handicap.....II 142
 - As a naval base.....II 135
 - Duty of U. S. to.....II 128
 - Purchase of, condemned by R.
 - Olney.....II 131
 - Not warranted.....II 135
 - Primacy of U. S. on American
 - continents.....II 138
 - Spanish war on, effect of.....II 124
 - Check on, in senate.....II 206
 - Isolation, abandonment of.....II 126
 - Evils of.....II 125
 - Inadequate to national
 - Maturity.....II 126

- Forestry.....
 - Appalachian hill.....V 409
 - Lumber, qualities of American.....III 355
 - Reforestation in N. Y.....III 360
 - (See also lumber).....
- Forrest, Edwin.....I 309
- Fossils, study of.....VII 31
- Foster, Frank K.....
 - Strikes, and the philosophy of
 - the strikers.....VIII 152
- Foster, John W.....
 - Hague convention on.....II 220
- Foundries.....
 - Association founders.....VIII 92
 - Strikes, in.....VIII 92
- France.....
 - America, proposed alliance of
 - 1793 with.....II 159
 - Extradition, initiates.....II 172
 - Lawyers in.....II 100
 - Louisiana, colonizer of.....II 267
 - Mexico, designs of, on.....II 177
 - Reciprocity agreement of 1898.....II 217
 - Revolution of, accepted by
 - America.....II 161
 - Treaties with U. S., early.....II 159
 - Trusts, prohibited in.....II 264
 - U. S. and neutral rights.....II 165
 - Forbidden to commission officers
 - in.....II 162
- Franchises.....
 - Public, decision of Taney on.....II 71
- Francis, S. W.....
 - Typewriter patents of.....VII 366
- Frankel, Leo K.....
 - Jewish charities.....X 57
- Franklin, Benjamin.....II 13
 - Art and.....I 333
 - "Canada Pamphlet" of.....IV 78
 - Diplomacy of.....II 147
 - Electrical works of.....VII 109
 - Literature and.....I 351
 - Medical colleges, assisted.....VII 407
 - On the constitution.....II 60
- Fraser, John Foster.....
 - Causes of American manufac-
 - turers' success.....III 283
- Fraternities, benevolent.....
 - (B. H. Meyer).....X 232
 - Age and rates.....X 238
 - Benefits paid.....X 247
 - Defects of.....X 233
 - Dual nature of.....X 233
 - Failures of.....X 234
 - Law, proposed.....X 245
 - Membership, total.....X 247
 - National congress of, nature of.....X 247
 - National congress.....X 235
 - Number of, and benefactions.....X 232
 - Rates.....X 235
 - And age, table of.....X 241
 - Reserve and surplus of.....X 239

- Fraternities, benevolent—Continued.
 Uniformity needed.....X 244
 (See also societies, secret).....
- Free trade (see tariff).....
- Frelinghuysen-Zavala treaty.....II 245
- French, Arthur W.....
- City skyscrapers.....I 285
- French, Richard.....
- Renper of.....V 78
- Freret, F. G.....
- Cane sugar.....V 209
- Frick-Carnegie controversy.....VI 145
- Fruits.....
- American figs.....V 246
- Area and production.....V 8
- Burbank, L. grown by.....VII 105
- Canning industry, develop-
 ment of.....V 251
- Colonies, first grafted tree in.....V 242
- Transplanting European in.....V 240
- Dried, scarcity of, early.....V 243
- Europe, introduced from.....V 239
- Export, development of trade.....V 250
- Exports and imports of 1821.....V 243
- Foreign trade, beginning of.....V 242
- Grape and raisin production...
 (George C. Humman).....V 252
- Grape industry, American.....V 248
- History, American, early.....V 236
- Lemons, American.....V 247
- Nuts, American.....V 250
- Olives, American.....V 249
- Orange, American, industry.....V 246
- Pineapple industry.....V 247
- Porto Rican.....II 209
- Prune industry.....V 245
- Raisins, first California.....V 244
- Statistics of, American.....V 7
- Substitution of domestic for
 foreign, (W. A. Taylor).....V 236
- U. S., indigenous to.....V 236
- Vineyards, French, early.....V 242
- (See also specific names).....
- Fuller, Margaret.....I 358
- Fuller, Samuel, physician.....VII 402
- Fullerton, Hugh S.....
- Organization of office work.....VII 370
- Furnaces, blast (see iron).....
- G**
- Gadsden purchase.....II 285
- Treaty, isthmian canal, effect on.....II 237
- Gallard, Peter.....V 95
- Gallatin, Albert.....
- Canals and roads, report of.....III 9
- Galloway, B. T.....
- Intensive farming.....V 332
- Problems of American botany.....V 414
- Galvani.....VII 26
- Gambling.....
- U. S., common in.....III 385
- Dangers of, in cities.....II 118
- (See also speculation).....
- Gannett, Henry.....
- Our industrial position in the
 world.....III 1
- Gantvoort, Arnold J.....
- Music.....I 321
- Music and national life.....I 320
- Garber, John H.....
- American wine.....V 267
- Tobacco.....V 277
- Garfield, James R.....
- Beef industry.....V 174
- Garland, Hamlin.....I 345
- Garment workers.....
- Women in union.....VIII 395
- Garnets.....VI 330, 435
- U. S., in.....VI 330
- Gas.....
- By-products of.....VI 390
- Oske.....VI 390
- Consumption of.....VI 389
- Discovery of.....VI 384
- Distribution of.....VI 384
- Engine.....VI 391
- Fuel.....VI 386
- Geology of.....VI 381
- Heating power of.....VI 389
- History, early.....VI 380, 385
- Illuminant.....VI 388
- Laughing, (see nitrous oxide)...
- Natural (F. H. Oliphant).....VI 380
- Occurrence of.....VI 381
- Output of.....VI 383
- Pipe lines, first.....VI 387
- Pipes for distribution.....VI 392
- Pressure of.....VI 382
- Reduction of.....VI 391
- Storing and transportation of.....VI 388
- Uses of.....VI 384
- Waste of.....VI 387
- (See also petroleum).....
- Gates, John W.....
- Corners of.....III 390
- Louisville stock, his corner of.....III 380
- Morgan, J. P., aided by.....III 381
- Plunger, an all around.....III 390
- Promoter, as a.....III 234
- Steel corporation, and.....III 382
- Gears, Randolph Hlyd.....
- Historic swords.....IX 392
- Gems.....
- (G. F. Kunz).....VI 324
- (See also stones, precious).....
- Genet, M.....
- First French minister to U. S.....II 162
- Genius.....
- Race superiority and.....I 61
- Geology.....
- American, early.....VII 47
- Coal distribution.....VII 50
- Formations.....VII 48
- Fossils in carboniferous age.....VII 50

Geology—Continued.

- Glacial investigation in U. S.VII 51
 Government, beginnings of.VII 47
 Growth of.VII 18
 Leidy, discoveries of.VII 53
 Marsh and Cope, work of.VII 53
 Progress of.VII 31
 Soils, American, and agricul-
 ture.V 2
 Society, American of.VII 1
 U. S. survey.VII 45
 George, William R., philanthropist.X 166
 Georgia.
 Battleship.IX 302
 Cotton, introduction of.III 20
 Educational system.I 100
 Slave disputes, early.II 84
 Va. Crissholm.II 63
 Gerhard, W. W., physician.II 414
 Germs (see bacteriology).
 Germany.
 Gerry, Elbridge.II 17
 Lawyers in.II 100
 Policies, contempt of, for Ameri-
 can.II 207
 Principle of representation in
 Reichstag.II 38
 Samoan treaty with U. S.II 198
 Scholarship in.VII 91
 Trusts in.II 355
 Views, of on American industry.IV 55
 Gest, William F.
 The rise of **modern** trust com-
 panies.III 428
 Gibbons vs. Ogden.
 Decision in.II 69
 Giddings, Franklin H., sociologist.VII 92
 Gilman, N. P.
 Profit sharing and co-operation.VIII 302
 Girard, Stephen.
 And the Barings.III 408
 Character of.III 407
 Death of.III 410
 In finance.III 407
 Loan of 1814.III 409
 Girls.
 Reform schools for.X 165
 Glaciers.
 Investigation of, in U. S.VII 51
 Glucose.
 Manufacture of.V 171
 Glaciers.
 Ramsay's theory.VII 52
 Gladstone, W. E.
 American industry.VII 271
 Constitution, American.II 60
 Glass.
 Trusts in.III 164
 Glidden, Carlos, inventor.VII 398
 Going, Charles B.
 Village communities of factory,
 machine works, and mine.VIII 326
 Gold.
 Abandoned fields reworked.VI 219
 Amalgam methods.VI 219
 And good credits.VI 247
 Arizona.VI 218
 Belt, the great American.VI 220
 Colorado.VI 218
 California.VI 218
 Carmstock methods, influence
 of.VI 208
 Concentration methods.VI 212
 Cyanide, introduction of.VI 229
 Dredge mining.VI 205
 Drift mining.VI 206
 Effect of, on industry.VI 244
 Electro-cyanide process.VI 235
 Extraction methods.VI 210
 History, early, in U. S.VI 202, 215
 Hydraulic method, improvement
 of.VI 204
 Hydraulic placer mining, first.VI 203
 Inflow of, (E. H. Roberts).VI 242
 Inflow of, oils industrial machin-
 ery.VI 250
 Imports of.VI 246
 Klondike craze.VI 215
 Loss of, in old methods.VI 229
 MacArthur and Forrest's process.VI 233
 Methods of securing, various.VI 228
 Mining of.VI 202
 Money.VI 246
 In various countries.VI 247
 National credit.VI 248
 Nevada.VI 217
 Occurrence.VI 228
 Panic of 1857.VI 244
 Per capita in U. S.VI 246
 Patents.VI 230
 First.VI 230
 Process.VI 212
 Described.VI 231
 Early.VI 229
 MacArthur & Forrest's.VI 230
 Machinery of.VI 237
 Siemens-Halsk.VI 239
 Production of various nations.VI 249
 Pumping improvements.VI 209
 Quartz mining.VI 206
 Railroads, effect of, on.VI 213
 Reactions.VI 234
 Resources of far west, (J. A.
 Latta).VI 215
 Safety of currency and.VI 245
 Stocks of the world.VI 243
 Type of early mill.VI 210

Gold—Continued.

World's production in 400 years...IV 48
(See also finance).....

Gold and silver.....

Foreign trade in, for 1820-30....IV 107

Gold standard (see finance).....

Gompers, Samuel.....

Growth of American Federation
of labor.....VIII 143

Limitations of conciliation and
arbitration.....VIII 104

Gonzales.....

Battle of.....IX 41

Goodyearshoe machines.....VII 319

Gordon, John H.....

Binder of.....V 92

Goss, Samuel D., surgeon.....VII 431

Gould, George.....

Insurance deals of.....III 467

Gould, Jay.....

Strikes.....VIII 279

Telegraphs and.....IV 482

Government, American.....

Aid to farmers.....V 27

Apportionment of representa-
tion, shaken by.....II 41

Architecture (see architecture,
government).....

Centralization of its power.....II 205

Commercial opportunity and.....II 449

Commerce and.....IV 517

Constitution, unwritten safe-
guards of.....II 206

Education, rights of, in.....I 237

England, derived from.....II 446

Good, (Grover Cleveland).....II 8

Individual, the, and.....II 446

Industry, early American, and.....III 10

Investigation of labor.....

(R. T. Ely).....VIII 24

Its purpose, (Grover Cleveland).....II 4

Judiciary, the power of.....II 77

Labor, and.....II 446

Municipal, and democracy,

(E. B. Smith).....II 417

Opposition a saving feature of.....II 207

Organization of.....II 61

Peace in, drawbacks to.....II 201

Popular vote, nomination by

(R. M. La Follette).....II 397

President's power, growth of.....II 204

Problems before the nation,

(Theodore Roosevelt).....II 452

Representative, beginnings of

(E. J. James).....II 35

Scientific work of, (M. A. Lane).....VII 40

State, distinguished from the.....I 81

Strength of.....II 445

Whitelaw Reid, on.....II 443

(See also the state).....

Government ownership of railroads

(M. A. Knapp).....IV 360

America, early favored in.....III 43

Arguments against.....IV 355

Australia, in.....IV 365

Capital, security of.....IV 356

Discrimination and.....IV 361

Effects of, possible.....IV 363

Evils curable by.....IV 357

Extension of lines.....IV 359

Germany and.....IV 365

Initiative, might discourage.....IV 363

Objection to, political.....IV 356

Rates from, lower.....IV 359

Railroads, of.....IV 357

Speculation, would stop.....IV 355

Wages and.....IV 360

Wealth, would equalize.....IV 364

(See also socialism).....

Grain.....

Monopoly and railroads.....IV 335

Grand Rapids.....

Charity in.....X 20

Grangers.....

Railroads and.....IV 298

Grant, Robert, novelist.....I 365

Grant, General Ulysses.....II 153

Campaigns of.....IX 55

Peace utterance of.....II 153

Succeeds Halleck.....IX 10

Swords of.....IX 398

(See also war, the civil).....

Grant, President.....

Isthmian canal, proposed sur-
vey of.....II 240

Grapes.....

Bull, E. W., work of.....V 253

California, in early.....V 249

Catawba for wine.....V 270

Chautauque belt, production in.....V 253

Concord vines, planting of.....V 253

Culture, early American.....V 252

Diseases of.....V 257

Districts in U. S.....V 253

Eastern states, in.....V 256

Future of industry.....V 264-5

Picking and packing, methods of.....V 257

Phylloxera evil.....V 264

Prices of.....V 263-4

Pruning and grafting methods.....V 256

Raisin, production in U. S.,

(George C. Husman).....V 252

Soil for.....V 254-5

Stanford vineyard.....V 262

Success of industry.....V 264

Varieties grown in U. S.....V 259

Increase in.....V 252

Virginia, in early.....V 248

Wine production in U. S.....V 254

Graphite.....
 (J. Struthers).....VI 300-1
 Amorphous graphite.....VI 304
 Artificial.....VI 308
 Chemistry of.....VI 301
 Demand for.....VI 303
 In Ceylon.....VI 306
 In Europe.....VI 306
 Methods of treatment.....VI 304
 Occurrence of.....VI 301
 Output of, in U. S.....VI 308
 Principal American mines of.....VI 302
 Properties of.....VI 301
 U. S.....VI 302
 Uses of.....VI 308, 310
Graphophone, the.....
 Inventor of.....VII 10
Gray, Elisha.....VII 175
 Inventor of telephone.....VII 137
Gray, George.....
 Progress of international arbitration.....II 148
Great Britain.....
 Alaska boundary treaty.....II 161
 Behring Sea fisheries dispute.....II 92
 Boer war, rejects American offer of intervention in.....II 197
 Committee on grievances of American colonies.....II 13
 Foreign policy, compared with U. S.....II 137
 Monarch in war, power of.....II 201
 Neutral rights, U. S. and.....II 166
 Philippine possession, aid of to U. S., in.....II 142
 Treaty of 1897.....II 150
 Trusts in.....II 356
 Venezuela boundary dispute.....II 182
Great Northern railroad.....
 Steamers of, for Orient.....VII 205
 West, opened the.....III 371
Greeley, Horace, editor.....I 373
Green, Horace.....
 Researches of.....VII 420
Greenbacks (see currency, finance paper money).....
Grindstones (see abrasive materials).....
Grosscup, Peter S......
 Trusts.....III 78
Guadaloupe Hkialgo.....
 Treaty of.....II 226
Guard, national.....
 Adams, J. Q. on.....IX 129
 Boughton, D. H. on.....IX 130
 Congressional power.....IX 130
 Constitutionally provided for.....IX 128
 Inadequacy of.....IX 133
 Inefficiency, early.....IX 137
 Jackson, Andrew on.....IX 129
 Law for, first.....IX 131
 Law of 1903.....IX 132

Guard, national—Continued.
 Lee, Henry, on.....IX 136
 Mexican war.....IX 138
 Training of, need of.....IX 139
 War of 1812.....IX 138
 Washington on.....IX 134
 (See also army, the, and war)...
Gulick Luther H......
 American school boy.....I 125
Gun cotton (see guns).....
Guns.....
 Balloons and.....IX 391
 Cannon, early.....IX 388
 Explosives used in.....IX 387
 Flintlock of Jefferson.....IX 394
 Hypocope, use of.....IX 388
 Maxim, H.....IX 386
 Peace power of.....IX 388
 Power of, various sizes of.....IX 390
 Rapid fire guns.....IX 388
 Rifles used by armies.....IX 387
 Size of.....IX 389
 Steel used in.....IX 389
 Submarine boats and.....IX 391
 Velocity of projectile.....IX 389
 (See also battleships, navy, the)
Gunboats (see navy, the).....
Gymnasia.....
 Need of.....X 51
 (See also education).....
Gypsum.....VI 320
 (S. B. Ladd).....VI 407
 Cement.....VI 412
 Chemistry of.....VI 409
 Composition of.....VI 407
 Geology of.....VI 408
 History, early.....VI 409
 Occurrence.....VI 408
 Plaster of Paris.....VI 410
 Uses of.....VI 409

H

Habeas Corpus.....
 Framed by lawyers.....II 99
Hadley, Arthur T......
 Education and religion.....I 267
 Trusts.....III 111
Hague, peace conference.....
 American commission.....II 209
 Influence at.....II 200
 Ciar, the, and.....II 149
 Foster, John W., on.....II 220
 Future of.....II 107
 Holla, F. W., on.....II 221
 Lawyers' part in.....II 106
 Peace conference.....II 27
 Plus fund referred to.....II 222
 President of U. S., power of the.....II 208
 Principle of, leading.....II 201
 Ratification of treaty.....II 208
 Submission of cases to.....II 212
 Terms of Hague convention.....II 220

- Haines, Jonathan.....
 Cutter of.....V 98
 Harvester of.....V 94
Hale, Edward Everett.....I 366
Halle, von.....
 Trusts.....III 124
Halleck, Fitz Greene.....I 356
Halleck, H. W., soldier.....IX 2
Hamilton, Alexander.....II 52
 Banks, his dislike for.....III 403
 Financier.....III 402
 Soldier.....IX 3
Hamilton, Andrew.....
 Zeuger libel suit, defender.....II 98
Hamilton, Frank Hastings.....VII 432
Hamlin, Alfred D. F.....
 College architecture in U. S.....I 271
Hammond, W. A., physician.....VII 421
Hampden, John.....II 101
 Taxation, stand of, against.....II 99
Hampton, Calwyn E.....
 The army since the Spanish war.....IX 86
Hampton, Va.....
 Home for soldiers at.....IX 426
Hancock, John.....
 Signs declaration of independence.....II 24
Hancock, Winfield S.....
 Swords of.....IX 400
Handy, Roselle Funnell.....
 Geology in U. S.....VII 47
Harbors.....
 American.....IV 21
 European, deficiencies of.....IV 22
Harlan, John Marshall (asso. justice, Supreme court).....
 Railroad rates, decision on.....II 73
Harland, Henry, novelist.....I 366
Harper, William R.....
 Future of small colleges.....I 164
 Opportunity.....I 97
Harrington, Francis H.....
 Marine corps.....IX 378
Harris, Chapin A., dentist.....VII 438
Harris, Joel Chandler.....I 365
Harrison, Mrs. Burton.....I 366
Harte, Bret.....I 364
Harvard university.....
 Architecture of.....I 273
 Expansion of.....I 190
 In astronomy.....VII 64, 70, 76
 Lawrence scientific school.....VII 300
Harvey, Charles M.....
 The army in Mexican war.....IX 39
 The development of the South.....III 370
Harvey, H. A.....
 Armor plate of.....IX 333
Hate.....
 Colonial manufacture of.....IV 79
Havana.....
 Sanitary reform of.....II 304
Hawaii.....
 Annexation of.....II 218
 Production in, increased.....IV 42
 Rights of.....II 302
Hawkins, T. J.....
 Reaper of.....V 73
Hawthorne, Nathaniel.....I 267
Hay, John.....
 As author.....I 264
 Isthmian canal.....II 146
 Monroe doctrine.....II 143
 Pacific islands, American policy in.....II 146
 Peace, America's work for.....II 153
 Triumphs of American diplomacy.....II 144
Hay-Pauncefote treaty.....II 246
Hay.....
 Area and production.....V 6
 Crops, relative value of.....V 13
 Exports.....V 31
 Production.....V 31
Hayden, Horace H., dentist.....VII 436
Hayes, Rutherford B.....
 Isthmian canal, asserts American supremacy over.....II 243
Health.....
 Immigrants, sick, table of.....X 120
 Physical culture and.....X 52
Health, public.....
 Immigration and, (Allan McLaughlin).....IX 112
 (See also adulteration).....
Hearst, Mrs. Phoebe.....
 Educational gifts of.....I 274
Heat.....
 Producer of, U. S. largest.....IV 35
Heath, John E.....
 Bladder of.....V 90
Helena, gunboat.....IX 309
Helmholtz, Hermann von.....
 And the telephone.....VII 176
Hemp.....
 Area and production.....V 7
Henderson, Charles Richmond.....
 Charity.....X 1
 Science in philanthropy.....X 40
Henry, John C., electrician.....VII 139
Henry, Joseph, electrician.....VII 114
 Meteorology, and.....VII 10
Herald, New York.....I 374
Herbert, Hilary A.....
 Sea power and the navy.....IX 185
Hereditv.....
 Race superiority and.....I 46
Herna, James A.....I 311
Heron, Matilda.....I 209

Iewitt, Abram S. IV 454
 Tunnel plans of, in 1888. IV 454
 Underground railway, proposed. IV 454
Hewitt, Peter Cooper. VII 187
 Biographical sketch of. VII 187
 Three electrical inventions of. VII 183
Higgins, Charles. VI 15
 American underground workers. VI 15
 Mine workers. VI 15
Hillkoff, Prince Michael. IV 207
 Railroad man. IV 207
Hill, George William. V 51
 Trend of modern agriculture in
 U. S. V 51
Hill, James J. IV 253
 Nation's debt to railroads. IV 253
 Railroads profits. IV 254
 Workmen, methods with. III 255
Hirsch, Emil G. I 197
 American university ideals. I 197
Hirsch, Baron Maurits de. X 61
 Fund for Jews. X 61
Hobson, John A. III 42
 Concentration of industry. III 42
Hobson, Richmond P., sailor. IX 249
Hodge, H. L., physician. VII 414
Hoe, Richard M., inventor. I 379
Hoe, Robert. I 380
 Inventions of. I 380
Hogs (see packing and swine).
Holden, Edward S. VII 56
 American astronomy. VII 56
Holland, submarine boat. IX 302
Hollis, Ira Nelson. IX 239
 Navy in Spanish war. IX 239
Holla, F. W. II 221
 Hague conference. II 221
Holmes, Bayard. VII 423
 Surgery in America. VII 423
Holmes, George K. V 89
 Agricultural production and
 prices. V 89
 First American farmers. V 18
 The nation's farm surplus. V 389
Holmes, Oliver Wendell. I 360
 Researches of. VII 420
Holt Von. II 218
 Texas annexation treaty. II 218
Holy alliance. II 169
 Dissolution of. II 169
 South America, interference
 with. II 167
Home, the. VIII 353
 Mine workers'. VIII 353
 Railroads, and. IV 245
 (See also woman).
Homes. X 219
 Ladies' Christian union. X 219
Home soldiers' (see army, the).
Homestead works (see Carnegie
 Andrew). VII 434
Hook, Van, Weller, surgeon. VII 434

Hops. V 7
 Area and production. V 7
Hopedale, town of. VIII 333
Hopkins, Captain J. B. IX 206
 Cruise of. IX 206
Horner, Joseph. VII 260
 Copying American machinery. VII 260
Horner, W. P., physician. VII 413
Horner, William. VII 420
 Researches of. VII 420
Horses. IV 504
 Automobiles, and. IV 504
 First American. V 23
Horticulture (see flowers).
Horsack, David, Physician. VII 411
Hosery. VII 214
 Horse power in mills. VII 214
Hospitals. X 89
 British. X 89
 Building of, (Hollis W. Field). X 88
 Cuban. II 309
 Cost of maintenance. X 35
 Death rate influenced by num-
 ber of. X 89
 History and uses of. X 88
 Preponderance of, in charity. X 30
 Publicizing of. X 26
 Statistics of. X 35
 Tuberculosis. X 89
 United States, in. X 89
 (See also charities, insanity,
 medicine and surgery).
Hotels. I 299
 (W. A. Washburne). I 299
 Cost of. I 299
 Chefs of. I 300
 Clerk's duties. I 304
 Construction of. I 299
 Dishwashing. I 301
 Food supplies of. I 300
 Illumination. I 303
 Kitchens. I 301
 Laundry of. I 303
 Management of. I 299
 Power plants of. I 303
 Rates of. I 305
 Refrigeration. I 303
 Social life and. I 298
 Specialization in. I 299
 Steward's work. I 304
 Telephones in. I 305
 Wine cellars of. I 302
Houdon. I 332
 American sculpture, in. I 332
Houghton, George. VII 316
 American shoes. VII 316
 Standardness of American shoe. VII 316
Hourwich, L. A. VI 202
 Gold and silver mining. VI 202
 Lead and zinc ore. VI 273
 Trusts and prices. III 146

- Houston, Sam.....
 In early Texas.....II 278
 Soldier.....IX 41
 Howe, Elias, Jr.....
 Inventor of sewing machine.....VII 343
 Howe, J. L.....
 Inventions of.....VII 329
 Howells, William D.....I 362
 Huebner, Solomon.....
 Who owns the railroads.....III 330
 Hugenots.....
 In U. S.....I 16
 Hughes, R. E.....
 The public school system.....I 95
 Hull, Isaac.....
 Career of.....IX 256
 Naval officer.....IX 35
 Hull, William.....
 War of 1812 and.....IX 31
 Hunt, Walter.....
 Inventor of sewing machine.....VII 342
 Huntington, C. P.....
 Education.....I 240
 Hurricanes (see weather).....
 Huseman, George C.....
 Grape and raisin production in
 the U. S.....V 252
 Hussey.....
 Mower, of.....V 65
 Hussey and McCormick, Cyrus H.....
 Inventions of.....V 76
 Hussey, Obed.....
 Inventions and patents of.....V 80
 Hutchins, George A.....
 Development of railway cars.....IV 390
 Hyde, Charles Cheney.....
 Agreements other than treaties.....II 216
 Hyde, James Hazen.....
 Insurance schemes of.....III 467
 Hypocope, the, (see guns).....

I

- Iberville, Pierre de.....
 Mississippi river, visits.....II 268
 Ice.....
 Geological formation of.....V 3
 Ichthyology.....
 World's debt to.....VII 33
 Idaho.....
 Organized.....II 286
 Territory of formed.....II 274
 Ihering.....
 "Struggle for Law".....II 103
 Illinois.....
 Factory laws of.....VIII 52
 Union label law.....VIII 195
 Illinois, (battleship).....IX 301
 Illinois trust and savings bank.....
 Largest company.....III 438

- Illinois Central railroad.....
 Ownership of.....III 338
 Planned.....III 2
 Immigration.....
 And labor, (J. R. Commons).....VIII 236
 Canada, smuggled through.....X 124
 Character of immigrants.....II 438
 Character of.....VIII 262
 Charity and.....X 4
 Dangers from physically inferior.....X 125
 Discrimination in, dangers of.....X 125
 German.....I 42
 Increase since 1861.....III 377
 Inspection for diseased.....X 121
 Irish, causes of.....I 32
 Italian.....I 42, 439
 Cause of.....I 41
 Jewish.....X 60
 Negroes, white, vs.....VIII 405
 Number of.....I 42
 Paupers excluded.....X 138
 Peasants a distinct race.....I 8
 Policy on, American.....II 437
 Population decline of and.....X 213
 Problems of (F. P. Sargent).....II 437
 Prosperity, and.....I 27
 Public health and, (Allan Mc-
 Laughlin).....X 119
 Races, improves.....I 51
 Relief of.....X 159
 Religion and.....I 15
 Scandinavian.....I 41
 Settlements.....X 152
 Sick immigrants, table of.....X 120
 Standards for admissible.....X 126
 Statistics of from 1726 to 1903.....II 438
 Stature and.....I 51
 Taxation and.....I 44
 Trachoma, table of, afflicted
 with.....X 123
 Tuberculosis and.....X 123
 (See also trades unions, labor)..
 Imperialism.....
 Constitution, island possessions
 and.....II 202
 Philippine war protracted by
 anti-imperialism.....II 206
 Richard Olney, on.....II 136
 Imports and exports.....
 Agricultural, imports, value of.....V 15
 Automobiles.....IV 501
 Imports, decrease of, in 1820.....IV 91
 Increase of.....IV 4
 Increase of, under early tariff.....II 317
 New Orleans, early.....III 16
 South American.....IV 8
 Watches.....VII 362
 Independence, American.....
 New York, approved by.....II 23
 Vote of New York, New Jersey,
 Pennsylvania, Maryland, Dela-
 ware, and South Carolina, on.....II 13

Independence, Day, really July 2.....	II 19
Independence, Declaration of.....	II 14
John Adams, on.....	II 16
Mecklenburg declaration of.....	II 15
India.....	
Caste system of.....	I 5
Cotton exports.....	V 141
Grower, as.....	V 140
Suez canal, trade of, and.....	IV 20
Indians.....	
Agriculture, and.....	V 18
Indiana, U. S.....	IX 298
Individual, the, government and.....	II 447
The, society and.....	II 451
Indo-Germanic race.....	I 9
Indurite (see gums).....	
Industrial commission.....	III 105
Arbitration and strikes, on.....	VIII 36
Congress, on powers of.....	VIII 81
Employees, on protection to.....	VII 40
Experts employed by.....	VIII 26
General conditions, on.....	VIII 23
Injunctions, on.....	VIII 32
Labor unions, on.....	VIII 34
Profits, on.....	VIII 29
Recommendations of.....	VIII 42, 84
Report of.....	VIII 25, 27
Sweat shops.....	VIII 31
Unemployed the, on.....	VIII 32
Wages, on.....	VIII 30
(See also factories, trusts).....	
Industry.....	
American captains of, (W. R. Lawson).....	III 244
America historically favored.....	III 304
American, id-as, bigness of.....	III 250
Causes of American manufacturers' success, (J. F. Fraser).....	III 283
Methods copied.....	VII 206
Supremacy admitted.....	III 309
Vim.....	III 297
Americans a composite race.....	III 288
To, devotion of.....	III 287
Anarchy, remedies for.....	III 318
Arbitration, compulsory.....	III 321
Compulsory, antagonistic to business.....	III 315
Limits of.....	III 321
Bank of North America chartered.....	III 35
Bank of U. S. chartered.....	III 35
Banks, state the, and.....	III 45
Boss, American labor.....	III 250
English labor.....	III 251
Qualifications of the.....	III 255
Brains, American demand for.....	III 298
British and American employer and workman.....	III 284
British and American invention.....	III 290
British excellence in goods.....	III 296
Business principles in the conduct of industry, (R. H. Thurston).....	III 311

Industry—Continued.

Canals and railroads in west, early.....	III 27
Development of early American.....	III 25
Capital available, early foreign.....	III 31
Early demands for capital in West.....	III 23
Early eastern, in.....	III 25
Early invitations to foreign.....	III 32
In U. S., early supply of.....	III 29
Capitalists must rule.....	III 317
Captains of.....	III 244
Captains of, and his lieutenants, (W. R. Lawson).....	III 244
Carnegie, Andrew.....	
Encouragement of young men by.....	III 278
Forecast of future.....	III 281
Organization of manufacturing industries.....	III 273
Reward policy.....	III 274
Success, causes of.....	III 276
Works, employees' share in.....	III 280
Character of American.....	IV 52
Cities, growth of, in city.....	III 347
Code, model, for citizens.....	III 312
Colonization, conditions of success in.....	III 13
Commerce, early interstate.....	III 21
Commission, the industrial.....	III 105
Concentration of, (J. A. Hobson).....	III 49
Conduct, freedom of.....	III 312
Contract, the day of.....	III 277
Freedom of.....	III 315
Corporate factors in American progress, (W. R. Lawson).....	III 377
Corporations, early business.....	III 36
Small stock for early.....	III 39
Cotton, introduction of, into Carolina and Georgia.....	III 20
Debt, and national, after 1812.....	III 30
Department stores.....	III 72
Development, need of.....	III 311
Distribution, wide, needed.....	III 348
Employer, rights of the.....	III 315
Employers, struggle of American.....	III 256
Economy of production, American.....	IV 52
Education, American and European.....	III 305
American free.....	III 305
Best method of, for.....	III 308
Depends on.....	III 318-19
Engineering.....	III 307
French policy of.....	III 306
History and.....	III 304
National differences in.....	III 308
Secondary importance of, in.....	III 307
Electric power, cheapness of.....	III 349
Distribution.....	III 348
Distribution, economy of (Louis Bell).....	III 345

Industry—Continued.

Engineering in industrial works, (W. D. Ennis).....	III 257
Fundamental concept of.....	III 259
Speed of, in U. S. and England.....	III 248
Engineers, and consolidation of capital.....	III 258
As managers.....	III 257
England, early dependence on.....	III 34
Glory gone.....	III 285
Espionage, American system of.....	III 253
Foreign relations, early in- crease of.....	III 34
Foundry scene, a typical.....	III 264
French-American school.....	III 309
Furnace, forge and shop, (Day Allan Willey).....	III 264
Future of integration of.....	III 74
German view of American.....	IV 55
Girls employed in American.....	III 285
Gladstone on American.....	VII 271
Government control favored, early.....	III 43
Government, and early Ameri- can.....	III 10
Growth, early, of insurance.....	III 35
Hereditary class, no.....	III 308
Independence, national, in.....	III 311
Individual citizenship and.....	III 319
Industrial future of U. S., (F. A. Vanderlip).....	III 475
Integration of, (W. F. Willough- by).....	III 63
Three phases of.....	III 64
Intelligence, dependent on.....	III 305
Iron and steel, uncertainty of.....	III 279
Kentucky, settlement of.....	III 12
Labor organizations, future of.....	III 326
Part of, in.....	III 94
American, unskilled.....	III 230
Laborers and land.....	III 288
Leaders, American, hard workers.....	III 247
Legislative remedies.....	III 319
Locomotives, British and Ameri- can.....	III 296
London Spectator on Ameri- can.....	IV 54
Times on American.....	IV 53
Lumber, American.....	III 383
Machinery, American advantage in.....	III 294
Replacing new with newer.....	III 297
Manager, typical American.....	III 245
Manufacture as an engineering proposition.....	III 259
Manufacturers, boldness of Ameri- can.....	III 285
American, the first generation.....	III 286
Evils of the second generation.....	III 286
Moral rights in.....	III 312
Mulhall on American.....	VII 271
Napoleonic wars, and American.....	III 29

Industry—Continued.

Nationalities in American.....	III 254
Oil, consolidation of.....	III 71
Order, need of, in all depart- ments.....	III 273
Organizers, American, due to.....	III 243
Character of American.....	III 244
Our industrial position in the world, (Henry Gannett).....	III 1
Paris exposition, industrial edu- cation at.....	III 304
Patent office, superiority of American.....	III 290
Pennsylvania, settlement of western.....	III 12
Pioneers of American, (G. S. Callender).....	III 8
Policies, early American.....	III 2
Political supremacy, American and.....	III 302
Production, general, increased.....	III 301
Individual.....	III 312
Promoter, work of, in, (E. S. Meade).....	III 231
Railroads backward in consolida- tion.....	III 74
Development of early American.....	III 26
Planned, early western.....	III 27
Republic, dangers of the.....	III 310
Rights, legal and moral.....	III 313
Rolling mill, drama of the.....	III 265
Rosebery, Lord, on American.....	IV 54
School, American supremacy and the public.....	III 303
Schools, French commercial.....	III 306-7
Servants, good, in American.....	III 249
Share in, of capital, superintend- ence and labor.....	III 93
Shirking prevented.....	III 252
Shoes, British and American.....	III 296
Social improvement, importance of.....	III 346
Social remedies.....	III 320
South, post-bellum growth of in.....	III 372
Speculation in, early.....	III 39
State aid after civil war.....	III 41
Steel consolidation, history of.....	III 65
(See also production).....	
Steel corporation and integra- tion.....	III 64
Steel trust and Carnegie com- pany.....	III 69
Expansion of.....	III 69
Future of.....	III 71
Last phase of.....	III 68
Schwab on the.....	III 65
Strike, coal, of 1902, general demoralization following... ..	III 323
Losses in 1902.....	III 323
Strikes accomplish nothing.....	III 315
And treason.....	III 324

Industry—Continued.

- As war III 318
 Compulsion not bargaining III 314
 Education a remedy for III 318
 Effects of III 317
 Lawless III 314-15
 Should be suppressed III 317
 Subsidies, early American III 40
 Success, American brains secret
 of III 309
 Depends on reward of labor III 275
 Systems, example of American
 and English III 249
 Tariff lowers quality of goods III 289
 Tobacco, consolidation of III 72
 Tradition, freedom from III 304
 Training in public schools III 307
 Traitors, and public III 319
 Transportation companies, early III 36
 American, early III 8
 Integration of III 71
 Trusts and invention, economy
 the motive of III 264
 Twentieth century, struggle of
 the III 302-3
 Typical American establishment III 251
 Union labor principles, sound III 327
 Ultimate form of III 328
 Unions, legal incorporation of III 328
 University, and the III 319
 Virginia, settlement of western III 12
 Vosberg-Rekow, Dr., on America IV 58
 Wages lower, American III 288
 High, in America III 252
 Investing, in III 279
 Variety in American III 289
 Water power in falls III 348
 In New England III 349
 West, cotton in early III 18
 Effect of, opening of III 22
 First opening of the III 11
 Growth of the early III 19
 Influence of slavery on III 19
 Steamboating in early III 18
 The, in 1812 III 16
 Western commerce and, (L. M.
 Shaw) III 363
 Workers, energy of American III 251
 Workmen, good, rewarded III 254
 Workman, independence of
 American III 294
 Temperance of III 252
 Workers, requirements in III 252
 Youth favored in America III 298
 (See also trade, commerce, ship-
 building, tariff, agriculture,
 manufactures, and invention).
 Inebriety (see drunkenness)
 Ingalls, Melville E.
 Past, present and future of
 American railways IV 217
 Ingalls building
 Structure of I 292
 Ingram, F. F.
 How labor unions benefit the
 workman VIII 172
 Injunctions
 Industrial commission VIII 39
 Insanity
 Care of insane X 43-4
 Gartlock hospital X 110
 German methods of treating X 108
 History of, early X 104
 Hospitals for, ideal X 109
 Kalamazoo hospital X 115
 Methods X 115
 Michigan hospital X 112
 Psychopathic school X 117
 Provision for the insane, (W. M.
 Edwards) X 104
 Public spirit and X 107
 State asylums, evils of X 106
 Surgery and X 114
 Treatment of X 105
 Woodliffe hospital X 109
 Institutes, farmers'
 (See farmers and agriculture) ...
 Insurance
 Banking and III 453
 Compulsory X 14
 Death, chances of III 454
 Fraternal, in U. S., (B. H.
 Meyer) X 232
 Fraternal, table of ages, rates,
 and deaths X 235
 Growth of American, early III 35
 In practice, (O. J. Arnold) III 452
 Investigation, (Gilbert E. Roe) III 459
 Of 1877 III 467
 Laws regulating III 470
 Legal expenses of companies III 463
 Insurance, life
 Mutual Life Co. III 461
 Policies, kinds of life III 455
 Policy-holder's profits III 456
 Proxy juggling III 472
 Reserve of companies III 458
 Sources of income III 457
 Surplus III 464
 Uses of III 452
 (See also fraternities, benevolent)
 Interstate commerce (see commerce,
 Interstate)
 Invention, American
 Bicycles VII 8
 Capitalization, and VII 276
 Electrical VII 10
 Machinery, agricultural VII 7
 Morse VII 27
 Photography VII 10
 Rails, steel VII 39
 Telephone and graphophone VII 9
 Tools VII 8
 (See also industry)

- Invention and inventors.....
 United States leader in.....IV 36-7
- Invention.....
 As a factor of American national
 wealth, (W. C. Dodge).....VII 267
 Bessemer process.....VII 29
 British and American.....III 291
 Edison on, of incandescent lamp.....VII 194
 Electric light.....VII 154
 Encouraged in U. S.....VII 204
 Machinery and light.....VII 199
 Oliver Evans' engine.....IV 235
 Patents, American.....VII 277
 Sewing machine.....VII 339
 Telephone, (A. G. Bell).....VII 171
 Telephones.....VII 137
 Triumph of the American idea,
 (A. H. Ford).....VII 198
 Typewriters.....VII 365
 Turbine engines.....VII 254
 Wages, and.....VII 275
 Watches.....VII 351
 Wealth, cause of American.....VII 269
 (See also boots and shoes, com-
 pressed air, electricity, tele-
 graphs, agricultural machinery,
 science).....
- Iowa.....
 Agriculture, and.....III 365
 Territory of, formed.....II 273
- Ireland.....
 Scotch-Irish, the, and.....I 21
- Irish, the.....
 Immigration of, causes of.....I 39
 Girls in factories.....VIII 339
- Iron.....
 American and British steel.....VI 126
 Competition feared.....VI 125
 American primacy in, (J. F.
 Crowell).....VI 112
 Belgian competition.....VI 124
 Bessemer process, ores for.....VI 98
 Influence.....VI 107
 Blast furnace temperatures.....VI 88
 Capacity of.....VI 88-9
 New style.....VI 88
 Blast furnaces, modern (F. H.
 Crockard).....VI 88
 Output of.....VI 87-8
 Blowing engines.....VI 93
 Bosh plates.....VI 92
 Capital mining.....VI 81
 Carnegie mills, scope of.....VI 151
 Casting machine.....VI 91
 Charcoal furnaces.....VI 108
 Coal and.....VI 108
 Fields, Pocahontas.....VI 96
 Industry and.....VI 189
 Coke, need of good.....VI 97
 Production, growth of.....VI 97
 Colonial manufacture of.....IV 81
 Colorado.....VI 74
- Iron—Continued.....
 Conneville district.....VI 96
 Consolidations of capital in.....VI 102
 Cyclops plant.....VI 148
 Danger, future, from Europe.....VI 117
 Demand on mining methods,
 effect of.....VI 85
 Deposits, Appalachian chain.....VI 72
 Delaware and Virginia.....VI 71
 Duration of superior.....VI 99
 Non-American.....VI 100
 Ohio and Kentucky.....VI 72
 Port Henry.....VI 68
 Value of.....VI 75
 Duquesne plant.....VI 89
 England's priority.....VI 121
 English ideals.....VI 121
 Power, decline of.....VI 123
 European trade, future of.....VI 127
 German competition.....VI 124
 Growth of industry in U. S.....VI 95
 Of trade, era of.....VI 114
 Of U. S. steel trade,
 Cause of.....VI 116
 Homestead works.....VI 150
 Impulses in U. S., first.....VI 106
 Industry, foundations of Ameri-
 can (A. Brown).....VI 95
 Industry of U. S.,
 (F. W. Tausig).....VI 105
 In U. S., beginnings of.....VI 105
 Ores and early.....VI 63
 John Birkinbine.....VI 61
 Lake Superior region.....VI 81
 Manufactures, varieties of.....VI 132
 Milling and drifting.....VI 78
 Mills, horse power in.....VII 214
 Mining.....
 Achievements of.....VI 84
 Drama of.....VI 83
 Finance of.....VI 86
 Methods of.....VI 82
 Of blast.....VI 85
 Steam shovel.....VI 82
 W. Fawcett.....VI 80
 Missouri.....VI 73
 Nails.....VI 134
 National ideals in iron trade,
 (H. J. Skelton).....VI 120
 New England ores.....VI 70
 New Mexico.....VI 74
 Ore deposits, Allegheny.....VI 67
 (Birmingham, Ala.).....VI 67
 New York.....VI 69
 Pennsylvania.....VI 70
 Distribution and production.....VI 66
 Region, Lake superior.....VI 65
 Regions, magnetite.....VI 68
 Ores as basis of industry.....VI 97
 Commercial iron.....VI 62
 Composition of.....VI 62
 Melting.....VI 90

Iron—Continued.

Lake Champlain.....	VI	68
Difference of, in U. S.....	VI	76
Methods of treating.....	VI	64
Quality of.....	VI	76
Use of.....	VI	76
In U. S., consumption of.....	VI	66
Magnetic.....	VI	63
(See also iron).....		
Output of mines.....	VI	81
Pacific coast, on.....	VI	74
Pittsburg's influence.....	VI	106
Pig and steel, production of.....	VI	116
Pig iron, destiny of.....	VI	131
In southern colonies.....	VI	78
Production of.....	VI	131
Plates, iron, destiny of.....	VI	130, 133
Prices of.....	VI	103
Producers, world's greatest.....	VI	114
Products, miscellaneous.....	VI	135
Prospect for world's trade.....	VI	101
Purpose of, (Andrew Carnegie).....	VI	153
Regions of U. S.....	VI	108
Resources in U. S., natural.....	VI	96
Rocky mountains.....	VI	73
Skelp.....	VI	135
South, deposits in.....	III	374
In the.....	VI	110
Steel hardening metals, (J. H., Pratt).....	VI	177
Making, effects of.....	VI	115
Ores for.....	VI	98
Structural.....	VI	135
Tariff not vital.....	VI	100
Texas.....	VI	73
Tin plate.....	VI	133
Trade union influence.....	VI	111
Transportation of.....	VI	107
Trust movement and.....	VI	109
United States in trade.....	VI	113
In steel market, position of.....	VI	116
Leads in ore.....	VI	113
Steel corporation, (E. S. Meade).....	VI	127
Supremacy safe.....	VI	127
Use of, in city and country.....	VI	130
Uses of, (J. O'Donnell).....	VI	130
Wire rods, destiny of.....	VI	134
Springs.....	VI	135
Wyoming.....	VI	73
Youngstown plant.....	VI	89
See also trusts).....		
(See also steel corporation, United States).....		
Iron and steel.....		
Consolidation of, history of.....	III	65
Exports of.....	IV	81
Foreign demand for American.....	IV	81
Production, American and world's compared.....	III	4
Steel trust, future of.....	III	71
Schwab on the.....	III	68

Iron and steel—Continued.

Statistics of.....	III	162-3
Uncertainty of, A. Carnegie on.....	III	278-9
U. S. master in.....	VII	273
(See also foundries).....		
Iron clads (see armor plate, monitors, and navy, the).....		
Ironclads, the New, ironclad.....	IX	329
Irrigation.....		
(F. H. Newell).....	V	343
Arizona.....	V	349
Benefits of.....	V	352
Colorado.....	V	348
Columbia river region.....	V	350
Expenditures for.....	VII	45
History of.....	V	344
Idaho.....	V	349
Interstate character of.....	V	348
Lands, classes of irrigable.....	V	346
Study of.....	V	347-8
Use of irrigable.....	V	347
Law and funds.....	V	347
Montana.....	V	351
New Mexico.....	V	350
Oregon, in.....	V	351
Plant life, and.....	V	423
Problems, principal, of.....	V	345
Projects, some large.....	V	348
Regions to be reclaimed.....	V	346
Salvation army, work of.....	V	352
Utah.....	V	350
West, forest slopes of.....	V	345
Physical features of.....	V	346
The, reclamation of (F. H. Newell).....	V	343
Wyoming.....	V	349
(See also agriculture).....		
Irving, Washington.....	I	352
Lawyers in Knickerbocker.....	II	95
Island possessions.....		
Production in, American.....	IV	44

J

Jackson, Andrew.....		
At New Orleans.....	IX	38
National guard.....	IX	129
Tariff, protective.....	II	319
Jackson, Charles T.....		
Ether and.....	VII	427
Jackson, James.....		
Researches of.....	VII	420
Jackson, Samuel, physician.....	VII	414
Jacoby, Henry S.....		
American bridge construction.....	IV	400
Jails.....		
Schools for crime.....	X	256
(See also crime).....		
Jamaica.....		
Reciprocity with, opposition to.....	II	386
James I.....		
Irish conquest of.....	I	21

- James, Edmund J.....
 Beginnings of representative government.....II 35
 Representation, struggle of, basis of.....II 37
 Slavery in representation.....II 43
 States in representation.....II 40
James, Henry.....I 362
Jameson, David.....
 Sword of.....IX 398
Japan.....
 Cotton mills of, a menace.....II 257
 Foreign trade of.....II 256
 Rail-roads increase trade with.....IV 265
 Trade with, British and American.....IV 9
 Wages and railroads in.....VIII 412
Jay, John.....
 Debate of, on colonial freedom.....II 13
Jefferson, Joseph.....I 314
Jefferson, Thomas.....II 13, 14, 20, 21, 52
 Canals, and.....III 9
 French army commissions, interdiction of.....II 162
 Republic recognized.....II 161
 Mecklenburg declaration.....II 16
 Neutrality, defines.....II 163
 Reason for veto of apportionment bill.....II 53
 Supreme court appointees, his.....II 82
Jenks, Jeremiah W.....
 Filipino labor.....VIII 252
 How congress may control trusts.....III 222
Jenney, W. L. B.....
 Originator of high buildings.....I 289
Results.....
 Discovered copper in U. S.....VI 4
Jewett, Sara Orne, novelist.....I 365
Jews.....
 Broadness of, in charity.....X 58
 Character of the.....X 63
 Charities of, (Lee K. Frankel).....X 57
 Extent of.....X 70
 Charity, problems of.....X 59
 Loans.....X 66
 Cost of charities of.....X 61
 Dependent.....X 73
 Drunkenness among.....X 63
 Emigrant societies of.....X 60
 Employment for Jewish women.....X 67
 Finance in.....III 430
 Hirsch fund for.....X 61
 Immigration of.....X 60
 Since 1881.....X 62
 Indigent.....X 62
 Juvenile delinquency of.....X 72
 New York charities.....X 172
 Not paupers.....X 64
 Number of, in New York.....X 67
 Population of New York.....X 71
 Poverty of, in U. S.....X 60
 Relief societies of.....X 68
 Jews—Continued.....
 Scattering of American.....X 74
 Tuberculosis among.....X 68
 United Hebrew charities, work of.....X 65
 Vice among.....X 71
 Johns Hopkins hospital.....VII 418
Johnson, Emory R.....
 Economic value of Isthmian canal.....IV 181
Johnston, Mary.....I 366
Johnstown.....
 Military aid in flood.....X 84
 Red cross at flood.....X 81
Jolo.....
 United States territory.....II 225
Jones, John Paul.....IX 208, 210
 Bon Homme Richard and Serapis.....IX 254
 Career of.....IX 252
 Not an academy man.....IX 250
 Providence, commander of the.....IX 253
 Serapis, conquered.....IX 265
 Sword captured by.....IX 394
Journalism (see newspapers).....
Judiciary, American.....
 Powers of.....II 77
Judiciary.....
 Checks to, evils of.....II 84
 President, independent of.....II 91
 Supreme court, proposal to fix majority of.....II 86
Judson, W. V.....
 West Indies strategic value.....IX 403
Justinian.....
 Code of, futility of the.....II 85
- ## K
- Kansas.....
 Admitted.....III 373
 Railroads, helped by.....IV 210
 Territory of formed.....II 273
Kansas City.....
 Packing center.....V 177
Karch, Charles M.....
 Needles and pins.....VII 327
Kawson, John A., tariff commissioner.....II 335
 Treaties of, criticized.....II 338
 Reciprocity, made by.....II 384
Katahdin, ram.....IX 297
Kearsarge, battleship.....IX 300
Keller, Helen.....X 159
Kelley, Florence.....
 Child labor legislation.....VIII 59
Kelley, J. D. J.....
 Our advance in torpedo craft.....IX 317
 Recent advance in battleships.....IX 308
Kelsey, Carl.....
 Negro labor.....VIII 388

Kentucky.....	
Battleship.....	IX 309
Opening of.....	III 12
Ketchum, William F.....	
Mower of.....	V 95
Key, Francis Scott.....	I 357
Kidd, Thomas J.....	
American workmen.....	VIII 1
Kimball, F. A.....	
Introduced lemons.....	V 247
Kirby, O. W. A.....	
Mower of.....	V 95
Patents of.....	V 88
Kirchoff, Charles.....	
Mineral resources of U. S.....	VI 1
Knapp, Martin A.....	
Government ownership of rail- roads.....	IV 355
Knight, Walter H., electrician.....	VII 139
Knights of Labor.....	VIII 222
Organization of.....	VIII 144
Woman and.....	VIII 384
Knowles, Hazard.....	V 95
Know-nothingism.....	X 134
Knox, Philander, C.....	
Right of congress to control trusts.....	III 204
Kaolin.....	VI 313
Koren, John.....	
Benevolent institutions.....	X 22
Kuhn, Adam, American physician.....	VII 407
Kuklux.....	X 134-5
Kunz, George F.....	
Precious stones.....	VI 324
Kunzite.....	VI 333

L

Labor.....	
Abraham Lincoln on.....	VIII 175
Ambition in.....	VIII 254
American federation of.....	VIII 25
Requirements of.....	III 252
American underground workers, (C. Higgins).....	VI 15
Workman, (T. I. Kidd).....	VIII 1
And education, (W. J. Tucker).....	VIII 426
And immigration, (John R. Commons).....	VIII 236
Building trades in England.....	VIII 211
In U. S.....	VIII 213
Capital, and, (Grover Cleveland).....	II 5
Contention of, with.....	VIII 91
Duties to.....	IV 516
Independent of.....	VIII 176
Cheap, not best.....	VIII 265
Child, (Florence Kelley).....	VIII 56
Chinese, character of.....	VIII 252
In U. S.....	VIII 247
Climate and.....	VIII 249

Labor—Continued.

Closed shop contracts, (W. Drew).....	VIII 215
Commerce and.....	VIII 409
Commodity, a.....	VIII 249
Compulsory arbitration.....	VIII 118
Conditions of, changed.....	VIII 246
General.....	VIII 28
Congress, power of, and laws.....	VIII 81
Co-operation of, and capital, (W. H. Pfahler).....	VIII 89
Debt to railroads, (G. M. Walker).....	VIII 408
Decentralization of.....	VIII 429
Definition of.....	VIII 153
Demogogy, political, and.....	IV 516
Education, caste, and.....	I 245
Employers', American, struggle.....	III 256
Undue claims of.....	VIII 106
Factories, (G. W. Aiger).....	VIII 46
Factory, as a social element, (C. D. Wright).....	VIII 338
Factory, machine shop, and mine, (C. B. Going).....	VIII 326
Federation, organization of American.....	VIII 144
Of, permanence of.....	VIII 222
Filipinos as laborers.....	VIII 251
Foreigners in, unions.....	VIII 228
Government and.....	II 446
Government investigation of, (R. T. Ely).....	VIII 24
Gould Jay, on.....	VIII 279
Grievance of, chronic.....	VIII 428
Growth of American federation of labor, (S. Gompers).....	VIII 143
Higher education, and.....	VIII 429
Hopelessness of.....	VIII 426
Immigrant, and machinery.....	VIII 260
Desirable.....	VIII 245
Character of.....	VIII 241
Immigration and, (J. R. Com- mons).....	VIII 236
And production.....	VIII 241-2
Impersonality of laborers.....	VIII 319
Imported.....	VIII 199
Industrial commission, experts of.....	VIII 26
Report of.....	VIII 25, 127
Industry, its part in.....	III 94
Intelligence, and money, (Charles R. Flint).....	III 91
Knights of.....	VIII 25, 144
And woman.....	VIII 384
Label law, Illinois union.....	VIII 194
Labor law, alien, anti.....	VIII 240
Law, (F. J. Stimson).....	VIII 194
Constitutionality of.....	VIII 87
Growth of.....	VIII 88
Opposition to.....	VIII 86
Uniform or graded.....	VIII 85
Machine shops, (M. Cokely).....	VIII 367

Labor—Continued.

- Machinery and, (H. White).....VIII 365
 Manual training in public schools,
 (H. E. Back).....VIII 418
 Mine workers, (John Mitchell).....VIII 346
 Money power, laborers the
 real.....III 95
 Monopoly and the struggle of
 classes, (G. B. Clark).....VIII 127
 Motive power and.....VIII 212
 Motives to.....VIII 253
 Neglect of workmen.....VIII 320
 Negro, (C. Kelsey).....VIII 386
 Negroes, conditions of.....VIII 250
 Open shops, (J. R. Commons).....VIII 199
 And wages.....VIII 211
 Contracts.....VIII 207
 Defined.....VIII 201
 History.....VIII 199, 203
 Policy, (J. R. Commons).....VIII 199
 Occupation, choice of.....VIII 431
 Organizations, future of.....III 326
 Unlawful.....III 325
 Organized and worked in Amer-
 ica, how.....III 244
 Power of.....VIII 91
 Part of, in industry.....VIII 90
 Population and mileage of vari-
 ous countries.....VIII 409
 Principles, sound union.....III 327
 Problems of.....VIII 139
 Profit sharing.....VIII 302
 Race and, living standard.....VIII 256
 Railroad capitalization and.....VIII 410
 Railroads and.....VIII 408
 Rights of.....VIII 105, 281
 Solidarity, causes of.....VIII 427
 Shirking in America.....III 253
 Skilled, (J. Richards).....VIII 275
 And wages.....VIII 266
 Proportion of.....VIII 243
 Specialization of American.....VIII 243
 Strikes, court decisions on.....VIII 201
 Management of.....VIII 168
 Study of, progress in.....VIII 25
 The social engineer, (W. H.
 Tolman).....VIII 319
 The law and closed shops, (W.
 Drew).....VIII 215
 Transportation, and, cost of.....VIII 410
 Relations of, to.....VIII 409
 Trusts and cheap.....III 100
 Union, ultimate form of.....III 328
 Unskilled, degradation of.....VIII 432
 Village communities of factory
 and mine, (C. B. Goring).....VIII 326
 Wage systems, (A. E. Outer-
 bridge).....VIII 291

Labor—Continued.

- Wages, cause of high, (A. M.
 Low).....VIII 262
 In U. S., (A. M. Low).....VIII 262
 Of American and European,
 comparative.....III 5
 Of farm.....V 109
 Of skilled (J. Richards).....VIII 275
 Premium system of.....VIII 291
 Woman, present status of.....VIII 376
 Woman's place in.....VIII 374
 Place in organized (S.
 Yudelson).....VIII 375
 Workman, efficiency of Ameri-
 can.....III 5
 Good, rewarded.....III 254
 Wrecked labor organizations
 (E. Stewart).....VIII 221
 (See also child labor, civic federa-
 tion, workmen, trades-unions
 factories, industrial commis-
 sion)
- Labor unions.....
 (F. F. Ingram).....VIII 172
 Check on Wall street.....III 382
 Immigrants and.....VIII 226
 Lawful.....III 327
 Legal incorporation of.....III 328
 (See also trades unions).....
- Land grant bill.....
 Education, and technical.....VII 303
- La Cour, Paul.....
 Telephone, inventor of.....VII 175
- Ladd, Story B.....
 Gypsum.....VI 407
- La Follette, Robert M.....
 Nomination by popular vote.....II 397
 Railroad regulation.....IV 294
- Lakes, Arthur.....
 Copper ores in U. S.....VI 269
- Lakes.....
 Carson and railroads.....IV 289
- Lakes, the great.....
 Advantages of, geographical.....IV 148
 And war craft.....IV 142
 Beauty of.....IV 141
 Canals of.....IV 150
 Commerce of, (Ray Stanard
 Baker).....IV 141
 Great Salt, and railroads.....IV 279
 Half century of.....IV 142
 Lading methods unrivaled.....IV 146
 Sailors on.....IV 149
 Ships built in lake yards.....IV 145
 Standard oil and.....III 175
 Steel corporation, and U. S.....IV 146
 Tonnage of.....IV 145
 Trade of.....IV 30
 Annual.....IV 148
 Variety of.....IV 148
- Lamps, incandescent (see electricity)
- Lampblack.....VI 399

Land.....	
Area of U. S.....	III 1
Cities, platting of, in.....	II 114
Lane, Michael A.....	
Scientific work of the govern- ment.....	VII 40
The American sociologist of the 20th century.....	VII 91
Lane, Ralph.....	
Found grapes in Virginia.....	V 236
Langley, S. P.....	VII 42
Langley, Samuel Pierpont.....	
Work of.....	VII 4
Lard.....	
Adulterated.....	X 293
(See also packing).....	
Larned, Charles William.....	
West point.....	IX 167
La Salle.....	
Mississippi, visits.....	II 267
Latcha, J. A.....	
Gold and other resources of far west.....	VI 215
Leather.....	
Trade statistics of.....	III 164
Law, James.....	
Actinomycosis germ, discovered.....	VII 421
Law, John.....	III 402
Law.....	
Crime in Chicago and Illinois and.....	II 109
For the people.....	X 310
Industrial rights.....	III 311
Law, international.....	
German contempt for American.....	II 207
Monroe doctrine, [not a part of].....	II 186
Law.....	
Civic duty, results of, neglect of.....	II 114
Neglected.....	X 309, 312
Obedience to (David J. Brewer).....	II 108
Reign of (Joseph W. Folk).....	X 307
Roosevelt, enforcement of.....	II 452
Lawrence Scientific school.....	VII 300
Lawson, W. R.....	
Captain of industry and his lieutenant.....	III 244
Corporate factors in American progress.....	III 377
Lawyers.....	
American life, place of, in.....	II 93
Burkes speech on conciliation.....	II 98
Bury, de, Richard.....	II 93
Carolinas, harassed in the.....	II 96
Civilization, an index to.....	II 115
Colonies, leaders in the.....	II 99
Corporation.....	X 308
Dartmouth college case.....	II 101
Diplomate, American, as.....	II 213
Good.....	X 309
Habeas corpus framers of.....	II 92
Hague conference and the.....	II 105
Future of.....	II 107

Lawyers—Continued.

Hampden's, John, stand on taxation.....	II 99
Ibering's struggle for Law.....	II 103
Irving's Knickerbocker, and.....	II 95
John Adams on independence.....	II 99
Liberty, lovers of.....	II 99
Macaulay on.....	II 94
Malne's Henry, opinion on American securities.....	II 101
Mansfield, Lord, and Justice Buller, debt of commerce to.....	II 106
Moore, Sir Thomas.....	II 95
Napoleon, on.....	II 94
Necessary.....	X 307
New York, New England, and Massachusetts, in early.....	II 97
Otis' attack, on writs of assist- ance.....	II 99
Parasites of society.....	II 100
Penn, Wm., in trial of.....	II 100
Pests.....	II 105
Peter the great, on.....	II 94
Popularity, and.....	II 105
Russia, China, France, Ger- many, England, and America, in.....	II 100
Shakespeare, and.....	II 93
Utopia, in.....	II 95
Venezuela settlement, part of, in.....	II 105
Virginia, forbidden fees in.....	II 95
Webster, Daniel, in Dartmouth college case.....	II 102
Zenger libel suit.....	II 98
Lee, Henry.....	
National guard, on.....	IX 136
Lee, L. V.....	
20th century ideas about fighting ships.....	IX 281
Lee, Joseph.....	
Charities.....	X 14
Lee, Richard Henry.....	II 14
Lee, Robert E.....	
Career of.....	IX 61
Lead.....	
History of, in U. S.....	VI 273-4
Zinc ore, and, (Hourwich, L. A.).....	VI 273
Reduction of.....	VI 275
Lead, white.....	VI 322
Zinc ores and.....	VI 277
Leadville.....	
Discovery and development of.....	IV 291
Leather workers.....	
Conditions of.....	VIII 20
Leather (see boots and shoes).....	
Lebaudy, M.....	
College, French-American in- dustrial, founder of.....	III 306
Leclair, town of.....	VIII 324
Colonies, resolution of, freeing the.....	II 11
Legislation (see child labor).....	
Legislation, factory (see factories)...	

- Legislatures.....
 Supreme courts, makers of.....II 82
- Leldy, Joseph.....
 Discoverer of trichina.....VII 419
 Discoveries of.....VII 53
- Letter, Joseph.....
 Wheat deal of.....III 390
 Deals of.....V 156
- Leland Stanford, Jr., university.....
 Architecture of.....I 274
- Lemons.....
 American.....V 247
- Leo XIII.....
 Education and.....I 208
- Leroy-Beaulieu, Pierre.....
 Railways, American.....IV 242
 Railroads, early.....IV 236
- Lesseps Ferdinand de.....
 Panama, and.....IV 171
 (See also Suez and Panama canals)
- L' Etrange, Roger.....
 Editor.....I 391
- Letters.....
 Writing of, quick.....VII 370
- Lewis and Clark expedition.....IV 272
- Libraries.....
 Architecture.....X 283
 Arrangement of public.....X 285
 Boston public.....X 279
 Buildings.....X 284
 Character of, early.....X 277
 Development of public, (C. A. Cutler).....X 275
 Early social.....X 277
 History.....X 275, 281
 In 1801.....X 275
 Librarians.....X 283
 Mercantile, early.....X 278
 Public, favored.....X 282
 Special reference.....X 278
 Statistics of a century.....X 275
 Town.....X 280
- Lick observatory.....VII 76
- Life.....
 Geology and origin of.....V 2
- Light, electric (see electricity).....
- Light.....
 U. S. largest producer of.....IV 35
- Lightning (see weather).....
- Lincoln, Abraham.....
 Character of, moral.....I 243
 Civil service reform, and.....II 413
 Labor.....VIII 175
 Strikes.....VIII 155
 Taney, compared with.....II 71
- Lindsey, S. A.....
 Patents of.....V 88
- Linen.....
 Decline of.....V 137
- Lintonite.....VI 334
- Liquor.....
 Ohio, as leading manufacturer in.....IV 101
 Production, American and world's compared.....III 3
 (See also drunkenness, malt liquor, liquor question, temperance)
- Literature, American.....
 (W. S. Walsh).....I 349
 Addison and Steele, influence of.....I 352
 Bradstreet, Anne, on.....I 350
 Eighteenth century, early.....I 356
 European ancestry of.....I 349
 Fiction.....I 365
 Foreign influence, early.....I 352
 Franklin, Benjamin, on.....I 351
 Humorist school.....I 364
 Indian stories.....I 356
 Irving, Washington, on.....I 352
 New England, early.....I 351
 Nineteenth century, early.....I 357
 Early in.....I 354
 Sandys, George, on.....I 350
 Seventeenth century, in.....I 350
- Literature.....
 Psychological school.....I 362
- Live stock.....
 American, early.....V 22
 Breeding grounds.....V 182
 Exports.....V 32
 Farm animals, value of.....V 29, 47
 Production, American and world's compared.....III 3
 Relative value of.....V 13
 Raising and marketing cattle and sheep.....V 175
 Shipping.....V 183
 Statistics.....V 175
 (See also agriculture, beef)
- Livingstone, Robert R.....II 13
 Debate of, on colonial freedom.....II 13
 Steamboating and.....IV 153
- Lloyd, James.....
 Supports navy.....IX 216
- Loans (see associations, building and loan).....
- Locke, Sylvanus.....
 Binder of.....V 92
- Lockouts (see strikes).....
- Locomotives.....
 American, (J. H. Converse).....IV 384
 Abroad.....IV 201
 Development of.....IV 386
 Type of early.....IV 386
 Why Europe wants.....IV 385
 Baldwin works organized.....IV 384
 British and American.....III 296
 Foreign and American, difference between.....IV 389

Locomotives—Continued.

Foreign, in U. S.	IV	385
Trade in	IV	385
Hauling power of	IV	386
History of, in U. S., early	IV	384
Load, weight of	IV	387
Manufacture, methods of	IV	388
Peter Cooper, first in U. S., built by	IV	384
Production, methods of	VII	208
Second in U. S.	IV	384
Speed of	IV	386
And steel rails	IV	387
Tariffs, foreign, on	IV	388
Weight of	IV	387
Works, list of present, (See also mining)	IV	385
Locomotive engineers		
Brotherhood of, organized	VIII	144
Lodge, Henry Cabot		
Races in U. S.	I	14
Lofft, Capel		
Reaping machine of	V	73
Logan, John, inventor	VII	358
Long, Clifford W.		
Ether, discoverer of	VII	414
First used	VII	415
Longevity		
Financiers'	III	405
Longfellow, Henry W.	I	359
Longworth, Nicholas, wine grower	V	270
Loomis, Francis B.		
Monroe doctrine, influence of	II	175
Louis XIV.		
Louisiana, colonizes	II	268
Louisiana		
Americans granted shipping privileges	II	270
Anglo-French treaty 1763	II	268
Area and present population of purchase territory	II	275
Battleship	IX	303
Colonized	II	268
France by Spain, ceded to	II	270
Political divisions of, successive	II	272
Production, present, of purchase territory	II	275
Purchase of, terms of	II	272
Spain, ceded to	II	269
Statistics of purchase land	II	275
United States, purchased by	II	270
Louisville, Cincinatti, & Charleston railroad, planned	III	26
Low, A. Maurice		
Protection in United States	II	312
Wages, cause of high	VIII	262
to U. S.	VIII	262
Low, Seth		
Arbitration, is compulsory, practicable?	VIII	110
Lowell, James Russell	I	360
Lowell, Percival	VII	8

Lowell, Mass.		
Early factories in	VIII	339
Luce, Admiral		
Founder of war college	IX	369
Ludlow, town of	VIII	332
Lumber		
American, (B. E. Fernow)	III	355
The best	III	356
Chicago market greatest	III	361
Civilization, in the van of	III	358
Cutting, annual	III	359
Early waste in	III	361
Distribution, geographical	III	360
German, America and	III	359
Hard wood, southern	III	361
History, early American	III	358
Labor and wages	III	358
Michigan, Wisconsin, and Minne- sota	III	367
Northwest, development of	III	358
Pacific coast, and railroads	IV	264
Panama canal, and	III	362
Pinerles, southern	III	361
Qualities of good	III	356
Quantity used in U. S.	III	357
Railroads, growth of, and	III	358
Reforestation, need of	III	360
Reforestry, N. Y. and	III	360
St. Louis hard, market	III	361
Trust, statistics of	III	164
Variety of American	III	356
Value of, industry	III	355
(See also forestry)		
(See also wood)		
Lyddite (see guns)		
Lynchings		
Races and	X	134

M

MacArthur and Forrest		
Cyanide process	VI	233
McBurney, C., surgeon	VII	435
MacCallum, W. G.		
Researches of	VII	421
McClellan, George B., soldier	IX	9
McCormick, Cyrus		
Inventions and patents of	V	80
McCormick, L. J.	V	92
McCormick and Hussey		
Inventions of	V	76
McCormick, Melvil		
American newspapers	I	367
McCulloch, Hugh		
Finance, in	III	405
McCulloch vs. Maryland	II	67
McCullough, John	I	315
McDevitt, F.		
Sword of	IX	401
McDonald, John B.		
Genius of, and N. Y. subway	IV	456
Subway, bld of, on N. Y.	IV	455

- McDowell, Dr., surgeon.....VII 429-30
 McGee, W. J.
 Fifty years of American science.....VII 1
 Mackay, John.....
 Comstock lode and.....VI 26
 Macomb, Alexander, soldier.....IX 6
 McKay sewing machine.....VII 322
 McKinley, President.....
 Foreign policy of.....II 145
 Peace, favored by.....II 154
 Philippine policy of.....II 289
 Porto Rican policy of, chal-
 lenged.....II 202
 Reciprocity, on.....II 375
 Tariff, early.....II 320
 (See also tariff).....
 McLaughlin, Allan.....
 Immigration and public health.....IX 119
 McPherson, James B.....
 Sword of.....IX 400
 Machias, gun boat.....IX 297
 Machine shops.....
 Conditions of.....VIII 357
 Energy of workers in.....VIII 357
 Machinery, elevated by.....VIII 361
 Uniformity-non of work in.....VIII 362
 Waste in.....VIII 363
 Machinery.....
 Advantages material, of.....VIII 373
 Air, compressed.....VII 247
 Machinery, American.....
 Abroad.....VII 201
 American colonies, and.....VII 201
 Britain, in.....VII 261
 British cities, and.....VII 262
 Calculating.....VII 373
 Chicago drainage canal, and.....VII 204
 Cog wheels.....VII 263
 Copying of, (Joseph Horner).....VII 260
 Cutting tools, rotary.....VII 264
 Encouraged.....VII 205
 Engineers, American, abroad.....VII 202
 Evolution of reaping, (M. F.
 Miller).....V 67
 Foreign discouragement, early.....VII 269
 Expositions, at.....VII 207
 Injury, prevents.....VIII 295
 Light, desired.....VII 199
 Office work.....VII 371
 Paris, exposition, at.....VII 261-2
 Population, and.....VII 277
 Russia, and.....VII 202
 St. Petersburg air brake plant.....VII 206
 Silk, and.....VII 203
 Turbine engines, (C. C. Fitz-
 morris).....VII 254
 Workmen, and.....VIII 2
 Machinery.....
 And labor, (Henry White).....VIII 365
 Building trades and.....VIII 370
 Child labor exploited by.....VIII 373
 Cotton (D. C. Roper).....V 129
 Machinery—Continued.....
 Economic effects of.....VIII 367
 Europe, American plants in.....IV 116
 Evils of.....VIII 373
 Gas engine, natural.....VI 391
 Karl Marx, on.....VIII 368
 Labor saver, as.....VIII 365
 Useful and useless, and.....VIII 366
 Machinists improved by.....VIII 361
 Metal working in, (E. H. San-
 born).....VI 283
 Development of metal working
 in, (E. H. Sanborn).....VI 283
 Mining.....VI 30
 New with newer, replacing.....III 297
 Painful effects of.....VIII 372
 Production and.....VIII 371, 272
 Quantity of, in U. S. and abroad.....VII 200
 Sewing machines.....VII 339
 Trades unions and.....VIII 368
 Trusts, help to.....III 51
 Typesetters and.....VIII 369
 Wear of, rapid.....VIII 295
 (See also agricultural machinery,
 agriculture, mining, boots and
 shoes, cotton machinery).....
 Machinists.....
 Character of American.....VIII 243
 Naval.....IX 347
 Unions of, wrecked.....VIII 222
 (See also machine shops).....
 Magna Charta.....II 58, 76, 99, 100
 Magnetism (see physics).....
 Maine, Sir Henry.....
 Securities, opinion of, on Ameri-
 can.....II 101
 Maine.....
 Shipbuilding, and early.....IV 101
 U. S.....IX 293
 Maseon Leclair, the.....VIII 311
 Malt liquors.....
 Ohio, as leading manufacturer
 in.....IV 101
 Malta.....VI 398-9
 Manchuria.....
 Machinery, American, in.....VII 202
 Manny, John H.....
 Patents of.....V 87
 Mansfield, Lord.....
 Commerce to, debt of.....II 106
 Manual training, (see education,
 technical).....
 Manufactures.....
 American, (Dr. Vosberg-Rekow).....IV 58
 American and world's, compared.....III 4
 America's greatness in.....IV 2
 Artisan, efficiency of Ameri-
 can.....III 5
 Capital invested in.....III 103
 Chinese mills.....II 251

Manufactures—Continued.

Colonial, British encourage- ment of.....	IV 82
Embargo on.....	IV 75
Restriction of.....	IV 75
Consumption, home.....	IV 2
Cotton.....	IV 6, V 113
Foreign aspect of American.....	IV 62
Eastern states and foreign trade.....	IV 97
Europe, American plants in.....	IV 116
European, American and.....	IV 1
Exports of, for 1904.....	IV 112
Foreign discouragement of American.....	VII 270
Hats, colonial, of.....	IV 79
Iron, colonial, of.....	IV 81
Of, in the South.....	III 374
Pig, in Southern colonies.....	IV 78
Japan, mills of, a menace.....	II 251
Molasses act of 1733.....	IV 83
New Jersey, early, of.....	IV 101
Ohio, early, in.....	IV 101
Plants, distribution of.....	III 347
In 1820, distribution of.....	IV 100
Population, proportion of Ameri- can, to.....	III 5
Power employed in American, (E. H. Sanborn).....	VII 210
Retaliation, beginning of Ameri- can.....	IV 98
Rhode Island, early, of.....	IV 101
Revolution, during the.....	VII 270
Sewing machines.....	VII 339
Success of American, (J. F. Fraser).....	III 283
Thirty years increase in.....	II 392
Trade, early American and for- eign.....	IV 99
Typewriters.....	VII 365
U. S. largest producer of.....	IV 35
Value of American in 1905.....	IV 17
Watches.....	VII 351
West, early in the.....	III 17
Increase of, in.....	III 376
(See also trusts, industry, pro- duction, ship building and com- merce)	
(See also power, motive).....	
Manufacturers (see industry).....	
Marcy, E. E.....	
Nitrous oxide applied to surgery.....	VII 415
Marcy, H. O.....	
Surgeon.....	VII 432
Marietta, cruiser.....	IX 301
Marine.....	
Corps, (F. H. Harrington).....	IX 378
(See also navy).....	
Marine, merchant.....	
British navy, early American, fostered by.....	IV 69

Marine merchant—Continued.

Competition with foreign sub- sidizer.....	IV 126
Earnings in 1820.....	IV 106
Increase of.....	IV 131
Restrictions of American.....	IV 92
Seas, freedom of, established by U. S.....	II 168
Sea power of U. S. (H. A. Herbert).....	IX 185
Tonnage, American 1861-1901.....	IV 131
U. S. a maritime nation.....	IX 186
Marion, Ind.....	
Home for soldiers at.....	IX 427
Mark Twain (see Clemens, Samuel C.)	
Marriage.....	
Drunkenness and.....	X 181
Marsh, C. W.....	
Binder of.....	V 90
Marsh, Edward A.....	
Watches and.....	VII 356
Marsh, O. C.....	
Discoveries of.....	VII 53
Marsh, W. W.....	
Binder of.....	V 90
Marshall, John.....	II 62, 64
Career of, end of.....	II 70
Chisholm, vs. Georgia, opinion on.....	II 65
Constitution, on meaning of.....	II 203
Gibbons vs. Ogden, decision on.....	II 69
History, opinions of, in American.....	II 85
McCulloch vs. Maryland Opinion on.....	II 77, 81
President, on duties of.....	II 66
Masculay, Lord.....	
Lawyers, on.....	II 94
Martin, Thomas Commerford.....	
Electricity in mining.....	VI 37
Martinique.....	
Disaster of.....	X 87
Marx, Karl.....	
Machinery.....	VIII 368
Maryland.....	
Cruiser.....	IX 302
McCulloch vs.....	II 67
Vote of, on American in- dependence.....	II 13
Masons, free.....	
Nature of masonry.....	X 252
Power of.....	X 251-2
Massachusetts.....	
American literature in early.....	I 351
Battleship.....	IX 298
Matthews, Brander.....	I 365
Maxey, Edwin.....	
Porto Rico, American work in.....	II 297
Maxim, Hiram.....	IX 386
Americans, employ.....	VII 206
Maximite (see guns).....	
Mayo, Frank, player.....	I 316

- Meade, Edward Sherwood.....
 Promoter, on the work of the...III 231
 U. S. steel corporation, on
 genesis of.....VI 137
- Mecklenburg.....
 Declaration of independence by...II 15
 Mecklenburg declaration.....
 Thomas Jefferson on.....II 16
- Medicine and surgery.....
 American Journal of the
 Medical Sciences.....VII 413
 Research.....VII 421
 Beaumont's stomach researches.....VII 419
 Bigelow, Jacob.....VII 412
 Bohn, Lawrence.....VII 402
 Boylston's smallpox inoculation.....VII 404
 Chapman, Nathaniel.....VII 413
 Chelmers' work.....VII 405
 Colleges, improvement of.....VII 418
 Doctors, early American.....VII 403-4
 Educators in, leading.....VII 419
 Ether, discovery of.....VII 414
 Fuller, Samuel.....VII 402
 Harvard school of.....VII 418
 History of, in U. S. early.....VII 425
 In America.....VII 402
 Holmes, Bayard, on American
 surgery.....VII 423
 Importance of, in U. S., early.....VII 409
 Institute of Philadelphia.....VII 413
 Journal of, and physical sciences.....VII 413
 King's college founded.....VII 407
 Leading American achieve-
 ments in.....VII 419
 McDowell.....VII 429-30
 Medical and Philosophical
 Register, the.....VII 411
 College in U. S., first.....VII 406
 Medicine in America, (T. B.
 Wiggins).....VII 402
 Nitrous oxide.....VII 415
 Number of schools in U. S.....VII 422
 Operations originated by
 Americans.....VII 430
 Ovariectomy invented.....VII 429-30
 Pott, John.....VII 402
 Prescriptions, early.....VII 403
 Repository, the, medical.....VII 411
 Revolution, in the.....VII 408
 Rush Benjamin.....VII 409
 Rush and Bard.....VII 407
 Russel, Walter.....VII 402
 Schools and the college.....I 176
 Society, medical, first in U. S.....VII 417
 Superiority of American surgery.....VII 423
 Three epochs of.....VII 42
 University of Pennsylvania.....VII 407
 Vaccination introduced.....VII 411
 Wotten, Thomas.....VII 402
 Yale medical school.....VII 411
 (See also dentistry).....
- Medicines, patent.....
 Poisons, as.....X 296
 (See also adulteration).....
- Melinite (see guns).....
 Melville, George W.....IX 341
 Naval engineers.....IX 341
 Melville, Herman.....
 Author.....I 354
- Men-of-war (see navy, the).....
 Mercury, (see quicksilver).....
 Mergenthaler, Ottmar, inventor.....I 380
 Merit system, (see civil service).....
- Merriam, William R.....
 Trusts, in the light of census re-
 turns, on.....III 159
- Merrimac, the.....
 Collier, in Spanish war.....IX 249
 Iron Clad.....IX 259
 Structure of.....IX 329
- Metals.....
 Trusts in, statistics of.....III 164
 (See under various names of
 metals).....
 (See also machinery).....
- Metallurgy.....
 Electro.....VII 27
 (See also electricity).....
- Metcalf, Victor H.....
 American trade and commerce...IV I
- Meteorology.....
 American work in.....VII 10
 Government expenditures.....VII 45
 Weather bureau, work of the...VII 392
- Metric system.....
 U. S. and.....VII 46
- Mexico.....
 Arbitration with, in 1883.....II 211
 Capital in, American.....IV 116
 France, designs of, on.....II 177
 Pius fund referred to Hague.....II 222
 Savages, agreement to pursue.....II 219
 Tehautepec ship railway.....II 234
 War with.....II 281
- Mexican cession.....
 Land of, statistics of.....II 256
 War (see war, Mexican).....
- Meyer, B. H.....
 Fraternal insurance in U. S.....X 232
- Miantonomah, Monitor.....IX 295
- Mica.....
 (Pratt, J. H.).....VI 361
 Occurrence of, in U. S.....VI 361-2
 Production of.....VI 362
 Quantity in U. S.....VI 364
 Uses of.....VI 363
 Value of.....VI 363
- Michigan, university of (see Univer-
 sity of Michigan).....
- Middleton, J.....
 Clay.....VI 312
- Middleton, Peter, physician.....VII 407

- Miles, Nelson A. IX 11
 Spanish war, order of, on. IX 11
 The United States army and its commanders. IX 11
- Military academy (U. S.). I 272
 Architecture of. I 272
 (See also West Point).....
- Militia (see war, guard, national, and army, the).....
- Milk.
 Adulterated. X 292, 298
 (See also dairying).....
- Miller, Lewis.
 Mower of. V 98
 Patents of. V 88
- Miller Merritt Finley.
 Reaping machines, evolution of. V 67
- Miller, farm, the. V 324
- Mills (see factories).....
- Millsbaugh, Charles F.
 Indian corn. V 168
- Millstone. VI 435
- Milton, John, an advertiser. I 390
- Milwaukee.
 Cruiser. IX 302
 Home for soldiers at. IX 427
- Mines.
 Feudalism of. VIII 328
 Railroads, stimulated by trans-continental. IV 290
 Western, helped by. IV 213
 (See also mining).....
- Miners.
 Accidents to. VI 20
 Children of. VI 20
 Comstock fire. VI 21
 Crown Point horror. VI 21
 Day's work of. VI 18
 Drilling. VI 19
 Fire damp, test for. VI 18
 Hours of work. VI 19
 Inventions to protect. VI 19
 Laws protecting. VI 20
 Life of the. VI 17
 Risks of decreasing. VI 23
 Salt, work of. VI 19
 Underground workers, (Charles Higgins). VI 15
 (See also mining).....
- Mine workers.
 Character of. VIII 354
 Children as. VIII 354
 Conditions of. VIII 346
 Espionage on. VIII 352
 Fatalities and risks. VIII 347
 Homes of. VIII 353
 Incentive, have no. VIII 355
 Life of, (John Mitchell). VIII 346
 Organization of. VIII 348
 Social importance of. VIII 355
 Strike of 1900. VIII 350
- Mine workers—Continued.
 Sufferings of. VIII 356
 Town, typical. VIII 352
 Truck stores. VIII 352
 Union perfected. VIII 349
 Unionizing, backward in. VIII 350
 Working year, shortness of. VIII 347
- Mineral resources of U. S.
 (Charles Kirchoff). VI 1
- Minerals (see mining).....
- Mining.
 Abrasive materials, (J. H. Pratt). VI 430
 African diamond mines. VI 27
 Alternating currents used in. VI 41
 American and world's, compared. III 5
 American copper ores, (Arthur Lakes). VI 260
 Asphaltum, (J. Struthers). VI 395
 Barytes, (J. H. Pratt). VI 443
 Bauxite, (J. Struthers). VI 266
 Belt conveyors. VI 35
 Benefitted by science. VI 12
 Bitumen, (J. Struthers). VI 395
 Blast furnaces, modern. VI 87
 Borax, (J. Struthers). VI 414
 Bridge tramways. VI 32
 Chain elevators. VI 34
 Clay, (Joseph Middleton). VI 312
 Coal, (E. W. Parker). VI 182
 Chain machines in. V 143
 Cutting, evolution of. VI 43
 Deposits of the world. VI 3
 Early coal, in U. S. VI 4
 Handling of. VI 34
 Coal, world's need and U. S. supply. VI 186
 Compressed air machines. VI 43
 Comstock lode, development of. VI 24
 Copper, (J. M. Sheahan). VI 252
 Copper ores, (A. Lakes). VI 260
 Crane, use of the. VI 35
 Crude mineral products, (J. Struthers). VI 317
 Cyanide.
 Establishments, number of. VI 227
 Process, (C. E. Munroe). VI 227
 Process, precious metals recovered by the, (Charles E. Munroe). VI 227
 Production. VI 227
 Value of. VI 227
 Dangers of lessened. VI 13
 Discoveries, early, in U. S. VI 4
 Electric.
 Coal cutters. VI 41
 Dredges. VI 68
 Drills. VI 44
 Haulage. VI 48
 Hoisting. VI 62
 Horsepower in. VI 38
 Lighting in. VI 55

Mining—Electric—Continued.

Locomotives.....	VI	47
Motors.....	VI	53
Plants in California.....	VI	40
Power at Raton.....	VI	39
Obtaining.....	VI	39
Transmission of.....	VI	40
Pumps.....	VI	54
Signal system.....	VI	60
Electricity.....		
In, (T. C. Martin).....	VI	37
Cheap.....	VI	40
Placer.....	VI	57
Mines using.....	VI	38
Gold and other resources of far west (J. A. Latcha).....	VI	215
And silver, (I. A. Hourwich).....	VI	202
Inflow of, (E. H. Roberts).....	VI	242
Graphite, (Joseph Struthers).....	VI	390
Gypsum, (Story B. Ladd).....	VI	407
High tension methods.....	VI	47
Handling raw material, (W. Fawcett).....	VI	30
Iron and steel, America's primacy in, (J. F. Crowell).....	VI	112
Iron industry, (F. W. Taussig).....	VI	105
Iron, (W. Fawcett).....	VI	80
Iron ores, (J. Birkinbine).....	VI	61-62
Lead and zinc ore, (I. A. Hourwich).....	VI	273
Lifting magnets.....	VI	36
Loading of vessels.....	VI	31
Mechanic arts and.....	VI	12
Mechanical engineering in.....	VI	446
Metal working machinery, (E. H. Sanborn).....	VI	283
Methods of, in different deposits.....	VI	28
Mica, (J. H. Pratt).....	VI	361
Occurrence and properties of.....	VI	361
Mine workers, (C. Higgins).....	VI	15
Mineral pigments, (J. Struthers).....	VI	317
Wealth of the west.....	VI	221
Minerals in U. S., distribution of.....	VI	3
Monopoly and.....	VI	10
National policy in mineral resources.....	VI	9
Nationalities in American.....	III	254
Natural gas, (F. H. Oliphant).....	VI	380
Resources, abuses of.....	VI	8
Petroleum.....	VI	366
Phosphate rock, (J. Struthers).....	VI	438
Pick mining.....	VI	42
Platinum, (D. T. Day).....	VI	297
Precious stones, (G. F. Kunz).....	VI	324
Progress of, (J. Birkinbine).....	VI	446
In U. S.....	VI	11
Pyrites and sulphur, (J. Struthers).....	VI	348
Quicksilver, (J. Struthers).....	VI	289
Rotary drills.....	VI	45

Mining—Continued.

Shearing machines.....	VI	44
Shot firing methods.....	VI	48
Steam shovels.....	VI	31
Steel hardening metals, (J. H. Pratt).....	VI	177
Trust and its methods, (C. S. Glead).....	VI	157
Sulphur and pyrite, (J. Struthers).....	VI	348
Talc and soapstone, (J. H. Pratt).....	VI	424
Telpherage method.....	VI	82
Tramways.....	VI	31
Underground workers, (C. Higgins).....	VI	15
U. S. steel corporation.....	VI	10
Value of mining products.....	VI	16
Of products in U. S.....	VI	5
Ventilation.....	VI	57
Water difficulties in.....	VI	27
World's supply of copper, (J. M. Sheahan).....	VI	252
(See also iron, machinery, miners).....		
Minneapolis.....		
System, grain elevator.....	V	152
U. S. cruiser.....	IX	299
Wheat, receiving.....	V	153
Minnesota.....		
Railroads, helped by.....	IV	211
Territory of formed.....	II	272
Wheat grower, as.....	V	31, 148
Minor, Thomas C.....		
Researches of.....	VII	420
Mints, the U. S.....		
Architecture of.....	I	283
Mississippi river, the.....		
Colonists, and American.....	II	269
French exploration of.....	II	267
White man's visit, first.....	II	267
Missouri.....		
Filipinos, sympathizers with.....	II	297
Railroad, first to charter transcontinental.....	IV	275
State formed.....	II	273
Territory of.....	II	272
Mitchell, J. K., physician.....	VII	420
Mitchell, J. W., physician.....	VII	414
Mitchell, John.....		
Hopelessness of labor.....	VIII	426
The mine worker's life and aims.....	VIII	348
Mitchell, Maria, astronomer.....	VII	62
Mitchell, O. M., astronomer.....	VII	73
Mitchell, S. Weir.....	I	368
Physician.....	VII	421
Mobs.....	X	134
Modus vivendi.....		
Nature of.....	II	233
Molasses (see sugar).....		
Molders.....		
Hernia, saved from.....	VIII	286

Molders—Continued.

- Pride of.....VIII 361
 Union.....VIII 93

(See also foundries, labor)....

- Molybdenum.**.....VI 180
 Steel, for hardening.....VI 180

- Monadnock, monitor.**.....IX 293

- Money.**.....
 In U. S.....III 477
 Paper, filth on.....III 396
 Philippine islands, of.....II 293
 Specie, 1820-30, exports and
 imports of.....IV 106
 (See also finance, gold).....

- Mongols.**.....
 Assimilating power of.....I 50

- Monitor, the.**.....IX 259
 Iron clad.....IX 259
 (See also armour plate).....

- Monopolies.**.....IV 294
 Railroad.....IV 294

- Monroe James, President.**.....
 Declares Monroe doctrine.....II 179
 War of 1812 and.....IX 28

- Monroe doctrine.**.....
 Blaine, James G., on.....II 187

- Dehts, not a bar to collection
 of.....II 188

- Declared.....II 179

- Hay, John, on.....II 145

- Influence of, (F. B. Loomis).....II 175

- International law, not.....II 186

- Interpretation of, proper.....II 189

- Isthmian canal, and.....II 243

- Limitations of, (J. B. Moore).....II 107

- Limitations of.....II 186

- Opponents of, American.....II 191

- Petit M., on.....II 183

- Polk's new, meaning of.....II 176

- Roosevelt's 1903 speech.....II 189

- Santo Domingo, American protest
 against Spanish sovereignty.....II 178

- Spanish war, effect of, on.....II 124

- Strength of, source of.....II 177

- Of to-day.....II 177

- Washington's plans, a departure
 from.....II 196

- Montague, Gilbert Holland.**.....
 Standard oil company, rise and
 supremacy.....III 171

- Montague, La. M., American
 physician.**.....VII 404

- Montana.**.....
 Railroads, helped by.....IV 213

- Territory of, formed.....II 275

- Organized.....II 286

- Monterey (monitor).**.....IX 296

- Moody, W. H.**.....
 Future of navy.....IX 278

- Moore, John Bassett.**.....
 Diplomacy, American.....II 158

- Moore, Sir Thomas.**.....
 Lawyers.....II 95

- Morgan, C. E., physician.**.....VII 421

- Morgan, George W.**.....
 Sword of.....IX 398

- Morgan, J. H.**.....
 Capture of.....IX 194

- Morgan, J. Pierpont.**.....
 Banks, control of.....III 419

- Steel exploits of.....III 67

- Trust, opinion of steel.....VI 163

- Wall street, power of, in.....III 381

- Morgan, John, American physician.**.....VII 406

- Morgan, Thomas.**.....
 Vacuum sugar pan of.....V 213

- Moros.**.....IX 79

- Government of.....IX 82

- Rebellion of.....IX 85

- Morris, Clara.**.....I 309

- Morris, Gouverneur.**.....
 Constitution, writer of the.....II 202

- Morse, Moses L.**.....
 Pin machine of.....VII 329

- Morse, Samuel F. B.**.....
 Merits of.....VII 123

- Pauper.....VII 122

- Telegraph, inventor of.....VII 117

- (See also telegraphs).....

- Morton, T. G., surgeon.**.....VII 435

- Morton, W. T. G.**.....
 Ether, applied, to surgery.....VII 415

- Moseley, Charles S., inventor.**.....VII 356

- Moseley commission.**.....VIII 48

- Moss agate (see agate, moss).**.....

- Motors (see automobiles and power,
 motive).....**

- Mott, Valentine, surgeon.**.....VII 431

- Mounds, the.**.....
 Interpretation of.....VII 42

- Mount, May Wilkinson.**.....
 American women in philanthropy.....X 218

- Mountains.**.....
 Railroad grades in Rocky.....IV 277

- Mulhall, Michael.**.....
 American greatness.....VII 271

- Power.....IV 199

- Mullaney, John F.**.....
 Roman Catholic universities.....I 207

- Municipal ownership.**.....
 New York subway and.....IV 452

- Wealth, street railroads of, as
 lever of.....IV 319

- Municipalities.**.....
 Carter, James C., on.....II 433

- Freedom, need of local.....II 424

- Importance of, prime.....II 433

- Mayor and council.....II 425

- Merit system in (C. R. Woodruff).....II 428

- Political, evils of.....II 418

- Population congested.....II 429

- Self government (E. B. Smith).....II 417

Municipalities—Continued.

- State, as agents of the.....II 424
 Creatures of the.....II 418
 Cleanliness in.....II 114
 (See also cities).....
 Munsterberg, Emil.....
 Poor relief in U. S.....X 139
 Munsterburg, Hugo.....
 American women.....I 402
 Murfree, Mary, novelist.....I 365
 Murphy, J. B.....
 Researches of.....VII 421
 Surgeon.....VII 433
 Music.....
 (A. J. Gantvoort).....I 320
 Awakening of, in America.....I 325
 Blind, for the.....X 102
 Education and.....I 324
 Life national, influence of, on.....I 320
 Public schools and.....I 328
 Reforming force.....I 327
 Social value of.....I 323
 Teaching of.....I 254
 War and.....I 322
 Wise men on.....I 321
 Mussey, Reuben Dimond, surgeon.....VII 430
 Mutual Life Insurance Co.....III 461

N

- Napoleon.....
 Britain blockaded, declared.....II 166
 Lawyers, on.....II 94
 U. S. and wars of.....II 162
 Wars, policy of.....II 138
 Naptha.....VI 397
 Nasby, Petroleum V.....I 365
 Nashua.....
 Watch industry.....VII 356
 Nashville, gunboat.....IX 300
 Nation, the, problems before.....
 (Theodore Roosevelt).....II 452
 National Cash Register Co.....VIII 336
 Natural gas (see gas, natural).....
 National guard.....
 (See guard, national.).....
 Naturalization.....
 Naturalized citizens, rights of.....II 171
 Naval academy, the.....
 (W. G. Richardson).....IX 350
 Accomplishments taught.....IX 364
 American science, and.....VII 69
 Architecture, of.....I 272
 Buildings and grounds of.....IX 352
 Cadets', expenses of.....IX 353
 Qualifications of.....IX 353
 Classics ignored.....IX 360
 Cruising.....IX 361
 Curriculum of.....IX 354
 Discipline.....IX 363
 Freshmen.....IX 361

Naval academy, the—Continued.

- Methods of.....IX 341
 Obedience a principle.....IX 362
 Origin of.....IX 350
 Percentage number of graduations.....IX 359
 Regime, daily.....IX 364
 Social life.....IX 364
 Teaching methods.....IX 354
 War college, the.....IX 368
 Games.....IX 367
 Navigation.....
 Rivers free.....II 168
 Navy, the.....
 Act of 1809.....IX 217
 Apprentices system.....IX 372
 Armour improvements.....IX 265
 Plate making.....IX 326
 Armoured ships of, first.....IX 331
 List of.....IX 338
 Battleships, recent advance in (J. D. J. Kelley).....IX 308
 Bill of 1883.....IX 291
 Birth of.....IX 186
 Bon Homme Richard-Seraphs fight.....IX 254
 British bases near U. S.....IX 157
 Building of the Atlanta, Boston, and Chicago.....IX 291
 Charleston, invasion of.....IX 188
 Civil war, the.....IX 189
 After the.....IX 289
 And.....IX 270
 Destruction of union ships.....IX 190
 Importance of, in.....IX 196
 Operations of, in.....IX 192
 Commerce, and.....IV 617
 Continental, department.....IX 204
 Cost of, annually.....IX 287
 War ships.....IX 286
 Cruisers, modern.....IX 282
 Of 1885.....IX 292
 Cushing's heroism.....IX 261
 Decatur, Stephen, career of.....IX 255
 Drills, daily.....IX 375
 1812, in.....IX 269
 Engineers in.....IX 341
 Need of.....IX 341, 342
 Engineering efficiency.....IX 342
 Melville's plans for.....IX 346
 Supervision, inadequacy of.....IX 343
 Farragut, D. G., career of.....IX 260
 Fleet of 1779.....IX 205
 Future of, (W. H. Moody).....IX 278
 Goodrich's raids.....IX 262
 Gunboat system ended.....IX 215
 Heroes of, (C. C. Fitzmorris).....IX 282
 Hollis, I. N., on the, in the Spanish war.....IX 239
 Hopkins, Capt. J. B., Cruise of.....IX 206
 Hull, Isaac, career of.....IX 256

Navy, the—Continued.

Improved guns.....	IX	285
Machinery.....	IX	284
In war of 1812, (J. R. Soley).....	IX	212
Isthmian canal, and.....	IV	181
Jones, John Paul.....	IX	208
Career of.....	IX	225
Landsmen in.....	IX	374
Life aboard ship.....	IX	374
Losses in early battles.....	IX	204
Marine corps, the.....		
(F. W. Harrington).....	IX	378
Duties of.....	IX	383
Early history.....	IX	378, 380
History.....	IX	379
Importance of.....	IX	381
Number of.....	IX	382
Officers of.....	IX	385
Merrimac and Monitor.....	IX	259
Monitor type fails.....	IX	290
Morgan, J. H., capture of.....	IX	184
Morris, Robert, plans of.....	IX	208
Naval academy, (W. G. Richardson).....	IX	350
Naval power, rank of U. S. in.....	IX	288
New foreign policy, American. Increase of, by.....	II	137
New navy, the (Fred Royce).....	IX	288
Building the.....	IX	288
Newport, engagement off.....	IX	205
Numerical strength of, in men.....	IX	305
Old American sea fights, (H. H. Boyesen).....	IX	263
Oliver H. Perry, Career of.....	IX	258
Policy of.....	IX	271
Porter, Horace.....	IX	268
Power aboardship.....	IX	284
Prejudice against, early.....	IX	216
Supported by Lloyd, Quincy, and Story.....	IX	216
Puritan, the, monitor.....	IX	291
Rations for men.....	IX	376
Recruiting.....	IX	371
Revolution, of the, (C. O. Paullin).....	IX	200
Operations of, in the.....	IX	201
Sailors, need of.....	IX	372
Sea power, (H. A. Herbert).....	IX	185
Seamen, training of, (W. W. Phelps).....	IX	371
Seas, freedom of, established by U. S.....	II	168
Ship building, new ships impetus to.....	IV	122
Ships of 1886.....	IX	293
Of 1887.....	IX	296
Of 1889.....	IX	297, 8
Of 1891.....	IX	299
Of 1893.....	IX	299
Of 1894.....	IX	300
Of 1895.....	IX	300

Navy—Ships—Continued.

Of 1896.....	IX	301
Of 1897-8.....	IX	301
Of 1900.....	IX	302
Of 1902.....	IX	303
Of 1903.....	IX	304
Twentieth century ideas about fighting ships, (I. V. Lee).....	IX	281
Uphaulding of, (Theodore Roose- velt).....	IX	273
War college, the naval, (Henry Wilson).....	IX	366
War of 1812.....	IX	188, 266
Ship of 1812.....	IX	227
Size of, needed.....	IX	304
State of, in 1809.....	IX	215
Steel ships, first.....	IV	120
Submarine experiments.....	IX	302
Torpedo craft, (J. D. J. Kelley).....	IX	317
Training enlisted men.....	IX	278
Trumbull-Watt engagement.....	IX	203
Weapons of.....	IX	386
West Indies, strategic value of.....	IX	403
Whipple's exploits.....	IX	207
(See also armor plate, battle- ships, naval academy, tor- pedo-boats).....		
Nebraska.....		
Admitted.....	III	373
Battleship.....	IX	302
Railroads, helped by.....	IV	211
Needles (see pins and needles, sewing machines).....		
Negro slavery.....		
Africa, conditions of, in.....	VIII	387
Agriculture, in.....	V	383
The best field for.....	VIII	406
Artisans, as.....	VIII	400
Not good.....	VIII	402
Backwardness of.....	I	30
Birth and death rate of.....	I	34
Cities, in.....	VIII	392
Civilization of, in U. S.....	VIII	387
Constitution and.....	X	271
Crime and.....	X	132-3
Criminals, as.....	VIII	403
Disease and.....	I	36
Distribution of, geographical.....	VIII	393
Domestic servants.....	VIII	399
Domestication of.....	I	26
Dred Scott case, opinion of Supreme court.....	II	87
Education, race problem and.....	I	2
Of, future.....	I	28
Effect of, on negroes.....	I	26
Evolution of, labor, (Carl Kelsey).....	VIII	386
Farmers, as.....	VIII	390
Failure of, as.....	VIII	394
Farming, unreliability of, in.....	VIII	398
Freedom, effects of, on.....	VIII	389
Future of, B.T. Washington, on.....	VIII	401

Negro slavery—Continued.

Improvement of.....	X	274
Increase of.....	I	32
Industrial experiments for.....	VIII	407
Inferiority of.....	X	272
Kentucky, in.....	VIII	393
Labor, (Carl Kelsey).....	VIII	386
Lynchings.....	X	134
Mississippi, in.....	VIII	394
Morals, low, of.....	VIII	404
Occupations of.....	VIII	393
Packing industries, in.....	VIII	227
Plantation, conditions of.....	VIII	250
Political rights of.....	I	26
Suppression of.....	I	27
Population, movement of, and.....	I	32-3
Post-bellum state of.....	I	26
Progress when free.....	I	2
Prostitution and.....	I	34
Race characters of.....	I	24
Problem in the south.....	X	271
Redistribution of.....	I	33
River regions, of the.....	VIII	396
School problem of.....	VIII	406
Seacoast, on the.....	VIII	393
Segregation of.....	VIII	390
Future of.....	VIII	392
Slavery conditions.....	VIII	388
Suffrage and.....	X	271
A mistake.....	X	273
Texas, in.....	VIII	397
Trades, in the.....	I	29
Unsanitary conditions of.....	I	35
Unskilled laborers as.....	VIII	391
White emigrants vs.....	VIII	405
Neil, John, physician.....	VII	419
Neison, N. O.....	VIII	334
Neutrality (see diplomacy).....		
Nevada.....		
Admitted.....	III	373
Territory organized.....	II	286
New England.....		
Art, influence on.....	I	332
Lawyers in early.....	II	97
Music and.....	I	325
Railroads, stock and share-holders of.....	III	335
Shipbuilding industry, early.....	IV	68
Water power in.....	III	349
New Granada.....		
Canal treaty of 1846.....	II	233
Isthmian canal, and the.....	II	232
Panama canal, proposed.....	II	232
New Jersey.....		
Battleship.....	LX	302
Independence, opposed to American.....	II	18
Vote of, on American.....	II	13
Manufactures, early, of.....	IV	101
New Mexico.....		
Ceded to U. S.....	II	283
Territory of, formed.....	II	285

New Orleans.....		
Founded.....	II	266
New York.....		
Armored cruiser.....	LX	296
Independence, approves American.....	II	23
Vote of, on American.....	II	13
Lawyers in early.....	II	97
New York city.....		
High buildings in.....	I	296
Subways of.....	IV	451
New York Central railroad.....		
Employees' clubs.....	VIII	323
New York Life Insurance Co.....	III	461
New York, university of (see university of New York).....		
New Zealand.....		
Arbitration in.....	VIII	37
Strikes in.....	VIII	122
Wage solution of.....	VIII	290
Newark, U. S. cruiser.....	IX	292
Newcomb, J. E.....		
Patents of.....	V	87
Newcomb, Simon.....	VII	6
Astronomy, some aspects of American.....	VII	67
Newell, F. H.....		
Reclamation of the west.....	V	343
Newport (cruiser).....	IX	301
Newspapers.....		
American, (Medill McCormick).....	I	367
Early.....	I	367
Associated press.....	I	376
Change gradual, in.....	I	378
Correspondence, early.....	I	379
Special.....	I	376
Cost of production.....	I	378
Crude news of early.....	I	369
Earnings of.....	I	375
Editorials, early.....	I	379
Editors, strength of early.....	I	372
History, early.....	I	368
Hoe's inventions.....	I	379
Mechanical improvement.....	I	375
Mexican war's, influence on.....	I	372
Modern era of.....	I	373
Newsgathering, early.....	I	371
Improvement of.....	I	374
Systematized.....	I	375
News secondary, in early.....	I	371
Number of, in various states.....	I	368
Paper used for.....	I	373
Political growth and.....	I	371
Power of, political.....	I	372
Press invented.....	I	379
Presses, cylinder.....	I	373
First iron.....	I	379
Modern.....	I	377
Progress of, rapid.....	I	375
Speed of service.....	I	379
Stereotyping introduced.....	I	379
Telegraphs first used.....	I	375

Newspapers—Continued.	
Varieties of, in U. S.	I 368
(See also advertising)	
Niagara.	
Motive power, how used	VII 221
Power, distribution of	VII 241
Power plants, American and	
Canadian	VII 240
Plants of	VII 239
Utilization of	VII 239
Turbine engines at	VII 257
Niblack, Lieut. Commander	
Battleship, the	IX 308
Nicaragua.	
British blockades of	II 188
Canal treaty of 1867	II 240
Nichols, Edward.	
Discovered bauxite in U. S.	VI 266
Nicholson, Henry C., electrician.	VII 133
Nickel.	
Hardening steel	VI 178
Nitro cellulose (see guns)	
Nitroglycerine (see guns)	
Nitrous oxide	VII 427
Surgery, applied to	VII 415
Nixon, Lewis.	
Shipbuilding, progress and promise of American	IV 119
North, S. N. D.	
Typewriters, and	VII 367
North, the.	
Representation of, in congress	II 47
Northern Pacific railroad.	
Military line	III 371
Northwest territories.	
Colonization, barred from, by	
President Monroe	II 170
Oregon, President Polk on	II 176
O'Donnell, John.	
Uses to which iron is put	VI 130
O'Neil, Joseph, C., surgeon.	VII 431
Nuts.	
Production, trees and	V 8
(See also fruits)	
O	
Oats.	
Area and production	V 5
Exports	V 32
Production	V 30
Observatories (see astronomy).	
Oceania.	
American trade with	IV 5, 43
Ochens.	VI 319
O'Donnell, John.	
Uses to which iron is put	VI 130
Office work.	
Labor saving systems of, (H. S. Fullerton)	VII 370
Ogden city.	
Railroads of	IV 279
Ogle, Henry.	
Reaper of	V 74

Ohio.	
Manufactures of, early	IV 101
Oil, coal (see petroleum).	
Oil.	
Adulterated	X 293
Consolidation of, industry	III 72
Foreign view of American	IV 57
Fuel in rice industry, as	V 285
(See also cotton seed, Standard Oil trust)	II 349
Oliphant, F. H.	
Natural gas	VI 350
Petroleum	VI 366
Olives.	
First American	V 249
Industry, American	V 249
Production of	V 8
American	V 249
Olney, Richard.	
Growth of our foreign policy	II 124
Omaha.	
Packing center, as	V 177
O'Neil, Charles.	
Armor-plate making	IX 326
Opals.	
In U. S.	VI 335
Mining of	VI 335
Open Door, the.	II 258
Oranges.	
Experiments, in, government	VII 44
First American	V 246
Ord, J. T.	
Sword of	IX 395
Ores.	
Iron, (J. Birkinbine)	VI 61
(See mining, also various metals)	
Oregon.	
Admitted	II 256
Battleship	IX 298
Becomes part of U. S.	II 284
President Polk on	II 176
Railroads, helped by	IV 212
Orient, the.	
American interests in	II 248
Australian foreign trade	II 256
Capital, absorption of foreign	II 257
Openings for	II 253
China compared industrially with Europe	II 258
Diplomacy, American, and	II 171
European supremacy is threatened	II 261
Japan's foreign trade	II 256
Mills of China and Japan	II 251
Opportunity, equal in	II 258
Railroads, effect of, in trade	IV 265
Solving of	II 254
Trade of United States	II 140
Orphans.	
Aiding	X 162
Cost of, supporting	X 31

- Osborn, J. D.
 Binder of 1859. V 21
 Osborne, D. M.
 Patents of. V 88
 Osborne, John Ball.
 Expansion through reciprocity. II 375
 Osgood, R. T.
 Patents of. V 87
 Ostriches.
 Growing industry, a. V 47
 Otis, James.
 Assistance, attack of, on, writs of. II 29
 Outerbridge, A. E., Jr.
 Premium system of wages. VIII 291
 Owen, John.
 Player. I 315

P

- Pacific cable.
 American support of. II 146
 Pacific ocean.
 Trade, American, with lands
 of. IV 15
 Pacific islands.
 U. S. policy in. II 146
 Packing.
 Agriculture, influence on. V 33
 Animals cared for. V 184
 Beef, canning. V 188
 Preparing. V 34
 Salting. V 187
 Western supply, early. V 176
 By-products. V 190
 Description of. V 192
 Cars, ownership of. V 189
 Chicago methods, modern. V 182
 Rise of. V 176
 Cincinnati, decline of. V 177
 Dairy products, and. V 190
 Food saver, as. V 33
 House, a modern. V 185
 Integration of, industry. V 188
 Killing and dressing. V 186
 Labor, alien, in. VIII 226
 Division of. V 185
 Organized, and. VIII 226
 Lands, cattle raising. V 182
 Lard rendering. V 189
 Loading on cars. V 189
 Missouri cities, trans. V 177
 River, west of. III 366
 Monopoly and railroads. IV 336
 Of products. V 191
 Prices. V 191
 Prosecution, meat trust. III 215
 Refrigeration, influence of. V 176
 Refrigerators, use of. V 187
 St. Louis in. V 177
 Sausage production. V 189

Packing—Continued.

- Statistics.
 Hog. V 181
 Percentage, for cities. V 180
 Receipts and slaughtering. V 179
 Texas live stock. V 182
 Weighing animals. V 185
 West, center in. V 178
 Paddock, J. S. V.
 Army in the revolution. IX 13
 Paducah, gunboat. IX 304
 Page, Thomas Nelson. I 365
 Page, Charles, Grafton, electrician. VII 124
 Merits of. VII 126
 Paine, Thomas. II 12, 16
 Paints.
 Barium. VI 322
 Gypsum. VI 320
 Metallic paints. VI 318
 Others. VI 319
 Venetian red. VI 321
 Painting (see art).
 Pan-American.
 Congress of 1826 and 1890. II 198
 Panama canal.
 Colon, cost of harbor at. IV 177
 Commission of 1889. IV 173
 Powers of present. IV 180
 Cost, estimated of. IV 175
 Distances via, table of. IV 183
 Efforts, first American. IV 170
 French, original plans of the. IV 172
 Plant, price of. IV 173
 Plant, value of. IV 174
 Unwise criticism of. IV 171
 Labor, problem of, required. IV 178
 Lumber, and. III 362
 New Granada, canal proposed
 by. II 232
 Origin of. IV 170
 Plans, various, suggested. IV 175
 Property, American, in. IV 174
 Railroad monopoly. IV 170
 Rights, American landed. IV 179
 Salubrity of isthmus. IV 178
 Some engineering problems of
 (J. F. Wallace). IV 170
 Treaties with Panama and
 Colon cities. IV 179
 Water supply and sewerage. IV 178
 Works incident to. IV 177
 Pancoast, Joseph, surgeon. VII 431
 Panics.
 Of 1855. II 327
 1857. VI 244
 1883. II 406
 Paper.
 Statistics of paper. III 164
 Parks.
 Need of, in cities. II 114
 Parker, Edward W.
 Coal. VI 182

- Parker, William, surgeon.....VII 434
 Parks, Charles T., surgeon.....VII 433
 Partridge, Charles A.....
 The army in the civil war.....IX 51
 Pasteur, Louis.....
 Work of.....VII 34
 Paternalism (see socialism).....
 Patent laws.....
 (O. H. Platt).....VII 384
 American system, foundation
 of.....VII 382
 Colonial.....VII 379
 Defects in.....VII 387
 Department created.....VII 383
 History, early.....VII 376
 Requisites for.....VII 388
 Rights, theory of.....VII 377
 Of patentees.....VII 389
 Patents.....
 Number granted in U. S.....VII 376
 U. S., laws, (C. M. Anderson).....VII 376
 (See also industry, inventions,
 science).....
 Patriotism, American.....
 Confidence, danger of over.....II 3
 Patten, Simon N., sociologist.....VII 98
 University training of business
 men.....I 218
 Paulding, J. K., author.....I 354
 Paulin, Charles Oscar.....
 American navy of the revolu-
 tion.....IX 200
 Paupers.....
 Immigration and.....X 136
 Number in America.....X 23
 Statistics of, in cities.....X 131
 (See also charities).....
 Pauperism.....
 Drink and.....X 16
 (See also charities).....
 Peace.....
 American government, draw-
 backs to, in.....II 201
 America's work for the world's,
 (John Hay).....II 163
 Carnegie's temple of.....II 107
 Gift to.....II 106
 Disarmament, American.....II 155
 Grant's, U. S., utterance.....II 153
 Hague, American influence at.....II 200
 Conference, future of.....II 107
 Conference, leading principle
 of.....II 201
 Conferences.....II 27
 Convention, terms of.....II 220
 McKinley and Roosevelt for.....II 154
 Roosevelt's President, message in.....II 156
 U. S., commissioners to.....II 209
 Venezuela case, lawyers' part
 in.....II 106
 Washington on.....II 155
 Peace Dale, town of.....VIII 334
 Peas.....
 Area and production.....V 7
 Peanuts.....
 Area and production.....V 7
 Peasants.....
 Distinct race.....I 8
 Inferiority of, political.....I 7
 Peck, George R.....
 Constitution, the march of the.....II 57
 Peirce, Benjamin, astronomer.....VII 62, 64, 74
 Penitentiary.....
 Joliet convicts, statistics of.....II 109
 (See also crime).....
 Penn, William.....
 Immigration, encouraged by.....I 19
 Old Bailey, trial of, at.....II 100
 Pennock, C. M.....
 Inventor flexible stethoscope.....VII 420
 Pennsylvania.....
 Cruiser.....IX 302
 Independence, opposed to Amer-
 ican.....II 17
 Manufacturing, earliest in.....IV 76
 Western, settlement of.....III 12
 Penology (see crime).....
 Pensions.....
 Act of 1890.....IX 438
 Appropriations for.....IX 430
 Civil service, and.....II 414
 Cost of, since 1890.....IX 430
 Early, in U. S.....IX 431
 Good in.....IX 435
 Law, present.....IX 438
 Number of invalids.....IX 434
 Origin of present system.....IX 431
 Public debt and, compared.....IX 445
 Qualifications for a.....IX 431, 435
 Rates of.....IX 432
 Spanish war veterans, for.....IX 441
 Statistics of, since 1865.....IX 444
 U. S. system, (W. H. Glasson).....IX 429
 Value of, annual.....IX 442
 Vetoed, acts.....IX 438
 Widows'.....IX 433
 Number of.....IX 434
 When granted.....IX 436
 Peonage.....VIII 419
 Pepper, E., physician.....VII 421
 Perry, Matthew, C., naval hero.....IX 395
 Perry, Oliver Hazard.....IX 35
 Career of.....IX 258
 Peru, cotton in.....V 107
 Peter the Great.....
 Lawyers, and.....II 94
 Petin, M.....
 Monroe doctrine.....II 183
 Petrel, U. S. gunboat.....IX 292
 Petrolatum (see guns).....
 Petroleum.....
 (F. H. Oilphant).....VI 366
 Asphaltum, constituent of.....VI 397
 Companies, early.....VI 373

Petroleum—Continued.

Composition of.....	VI 367
Formation of.....	VI 366
Fuel.....	VI 371
Illuminant.....	VI 372
Lubricants.....	VI 371
Mining of, early.....	VI 372
Natural supply in U. S.....	VI 7
Occurrence in U. S.....	VI 368
Pennsylvania development, early.....	VI 373
Pipe lines.....	VI 376
Transportation, early.....	VI 375
Varieties of.....	VI 367
World's occurrence of.....	VI 370

Pfahler, William H.....	
Co-operation of labor and capi- tal.....	VIII 89

Pharmacy.....	
Adulteration and.....	X 289

Phelps, Elizabeth Stuart.....	I 366
-------------------------------	-------

Phelps, William Wallace.....	
Growth of secret societies.....	X 249

Phelps, William Woodworth.....	
Training of seamen.....	IX 371

Philadelphia, U. S. cruiser.....	IX 295
----------------------------------	--------

Philanthropy.....	
Abnormal men.....	X 41

Carnegie institute, motive of.....	II 449
------------------------------------	--------

Colleges, benefactions for small.....	I 108
---------------------------------------	-------

Education and.....	I 264
--------------------	-------

Educational, (R. C. Woods).....	X 50
---------------------------------	------

Problem of educational.....	I 264
-----------------------------	-------

Science in, (C. R. Henderson).....	X 40
------------------------------------	------

Women, American, in, (May Wil- kinson Mount).....	IX 218
--	--------

(See also charity, education).....	
------------------------------------	--

Philippine Islands.....	
Agriculture of.....	II 292

American world-power, as factor in.....	II 200
--	--------

Anti-American rebellion, the.....	IX 79
-----------------------------------	-------

Army, the, in, (L. E. Wright).....	IX 74
------------------------------------	-------

Army in.....	IX 75
--------------	-------

China and the open door.....	II 134
------------------------------	--------

Commission, work of.....	II 289
--------------------------	--------

Condition of, improved.....	II 291
-----------------------------	--------

Conditions before and after Spanish war.....	IX 79
---	-------

Cotton, and.....	IV 14
------------------	-------

Currency of.....	II 293
------------------	--------

Duties of U. S. to.....	II 128
-------------------------	--------

Filipinos, rights of.....	II 295
---------------------------	--------

"Frislands", purchase of.....	II 293
-------------------------------	--------

Great Britain's help in.....	II 142
------------------------------	--------

Handicap, as a.....	II 142
---------------------	--------

Missouri's resolution of sym- pathy.....	II 207
---	--------

Moroc campaign.....	IX 80
---------------------	-------

Subjugated.....	IX 82
-----------------	-------

The government.....	IX 82
---------------------	-------

Naval base, as a.....	II 135
-----------------------	--------

Philippine Islands—Continued.

Olney, Richard.....	
---------------------	--

Purchase of, condemned by.....	II 131
--------------------------------	--------

On war in.....	II 129
----------------	--------

Policy.....	II 130
-------------	--------

Purchase of.....	II 127
------------------	--------

Not warranted.....	II 135
--------------------	--------

Railroads, need of.....	II 292
-------------------------	--------

Supreme court, decision of.....	II 88
---------------------------------	-------

Trade, influence of, on American.....	IV 63
---------------------------------------	-------

With, American.....	IV 45
---------------------	-------

Tropical fruits.....	VII 44
----------------------	--------

War in, protracted by anti- imperialism.....	II 206
---	--------

What we have done for the, (Luke E. Wright).....	II 289
---	--------

(See also army, the).....	
---------------------------	--

(See also Filipinos).....	
---------------------------	--

Phoenix, John, humorist.....	I 365
------------------------------	-------

Phonograph, the.....	
Office work, in.....	VII 372

Phosphate rock.....	VI 438
---------------------	--------

Chemistry of.....	VI 438
-------------------	--------

Fertilizer.....	VI 439
-----------------	--------

French.....	VI 439
-------------	--------

Geology of.....	VI 441
-----------------	--------

History, early.....	VI 438
---------------------	--------

U. S., in.....	VI 439
----------------	--------

Photography (see invention).....	
----------------------------------	--

Physics.....	
Application of, American.....	VII 9

Galvani's work.....	VII 26
---------------------	--------

Henry's magnets.....	VII 27
----------------------	--------

Liquid air.....	VII 12
-----------------	--------

Oersted, work of.....	VII 27
-----------------------	--------

Victorian age, in the.....	VII 6
----------------------------	-------

Volta's work.....	VII 26
-------------------	--------

(See also electricity).....	
-----------------------------	--

Peters, A. J.....	
Growth and handling of seeds.....	V 299

Pigments.....	
(J. Struthers).....	VI 317

(See also paints).....	
------------------------	--

Pike expedition.....	IV 273
----------------------	--------

Piles.....	
High buildings, for.....	I 291

Pins and needles.....	
(C. M. Karch).....	VII 327

History, early.....	VII 327, 332
---------------------	--------------

Howe, J. L., inventions of.....	VII 329
---------------------------------	---------

Machinery, first.....	VII 328
-----------------------	---------

Morse machine.....	VII 329
--------------------	---------

Needle, making a.....	VII 335
-----------------------	---------

Papering of.....	VII 330
------------------	---------

Pin, making a.....	VII 330
--------------------	---------

Sewing machines, and.....	VII 334
---------------------------	---------

Slocum, patents of.....	VII 329
-------------------------	---------

Pinkney, Thomas.....	
Spain, Mississippi treaty with.....	II 269

Pine (see lumber).....	
------------------------	--

Pineapples.....	
American industry.....	V 247
Florida.....	V 248
Pioneers.....	
American, early.....	IV 270
Tariff, and.....	IV 96
Pipe lines (see petroleum, Standard oil, natural gas).....	
Pipestone.....	VI 338
Pistols (see guns).....	
Pitkins, the.....	
Watch makers.....	VII 353
Pitt, William (of Pendeford).....	
Reaping machine of.....	V 73
Pittsburg.....	
Center of the world of steel.....	VI 166
Pius, fund.....	
Hague, referred to.....	II 222
Plantations.....	
Labor and.....	VIII 248
Plaster of Paris.....	VI 410
Plaster (see gypsum).....	
Plasterers.....	
Conditions of.....	VIII 21
Platinum.....	
(David T. Day).....	VI 297
History and production.....	VI 297
Platt, O. H.....	
Patent laws.....	VII 384
Players (see theaters).....	
Plums.....	
Burbank's.....	VII 108
Plunger, submarine boat.....	IX 300
Pneumatic machinery (see compressed air).....	
Poe, Edgar Allan.....	I 367
Poisons (see adulteration, and medicines, patent).....	
Police.....	
Appointment of, in cities.....	II 430
City, lot of policeman in.....	II 116
Factory acts and.....	VIII 77
Foreigner aversion of, to.....	II 117
Regulations of, limit of.....	II 120
Policies, American political.....	
(Charles W. Fairbanks).....	II 392
Civil service, and.....	II 408
Gold and silver.....	II 408
Trade and industry, increase of under republican.....	II 393
Political corruption.....	
Grover Cleveland, on.....	II 4
Political economy.....	
America, in.....	VII 93
Jenks' work.....	VII 95
U. S., rise of, in.....	I 90
Politics.....	
Nomination by direct vote of the people, (R. M. LaFollette).....	II 397
Population.....	
Agriculture and.....	IV 264

Population—Continued.

American.....	
Density of.....	IV 18
Origins of.....	I 9
Heterogeneity of.....	I 11
Area and, from 1790 to 1900.....	II 267
Chicago, mixed, of.....	II 113
China, density of, in.....	IV 18
Cities, of.....	X 128
Increase since 1854.....	IV 253
Kentucky, Pennsylvania, Virginia, and New York, early of.....	III 12
Louisiana purchase territory, of.....	II 276
Mexican territory in 1850, of.....	II 285
Peasants a distinct race.....	I 8
Inferiority of.....	I 7
Pennsylvania, early.....	I 19
Race and in U. S.....	I 1
Definition of.....	I 8
Superiority, (E. A. Ross).....	I 48
Races.....	
And classes.....	I 6
In U. S., union of.....	I 13
Unification of.....	I 4
Varieties of world.....	I 9
Representation, basis of, in.....	II 35
Suicide, race in U. S., (W. F. Wilcox).....	X 207
Tariff, and.....	II 316
The American people, (J. R. Commons).....	I 1
U. S., early, in.....	I 1
Voting population.....	X 136
West, increase of, in the.....	III 364
Western cities, early increase of, in.....	III 21
(See also suicide, race).....	
Porter, Horace.....	
The American navy.....	IX 268
Porto Rico.....	
Charity in.....	II 301
Conditions of, in 1898.....	II 298
Conquest of.....	IX 71
Education.....	II 299
Fruit industry of.....	II 299
Rights of.....	II 202
Roads of.....	II 298
Strategic value of.....	IX 409
Sugar and tobacco.....	II 299
Telegraphs.....	II 298
Trade, volume of.....	II 299
What U. S. has done for, (E. Maxey).....	II 297
Post offices, high.....	
Buffalo architecture.....	I 263
Postal service.....	
American, greatest.....	VII 272
Railroads, and.....	IV 249
Postmaster general.....	
Power to make treaties.....	II 211
Treat, empowered to.....	II 217

- Potatoes.....
 Area and production.....V 8
 Crops, relative value of.....V 13
 Production, increased.....V 31
 Pott, John, physician.....VII 402
 Potts, Jonathan, physician.....VII 407
 Pottery (see clay).....
 Poverty.....
 Crime and, in cities, (J. R. Commons).....X 128
 (See also crime, relief, poor).....
 Powder, smokeless (see guns).....
 Powell, E. P.....
 Twentieth century farming.....V 431
 Powell, John Wesley.....
 Irrigation and.....V 344
 Power, motive.....
 Aggregate in manufactures.....VII 210
 American manufactures, employed in, (E. H. Sanborn).....VII 210
 Boot and shoe industry, increase of, in.....VII 233
 Electric motors.....VII 220
 Roads.....VII 211
 Electricity, advantages of.....VII 228
 Gas engines, number of.....VII 216
 Horsepower in paper mills.....VII 214
 Average, in all industries.....VII 214
 Of gas engines.....VII 216
 Of steam and electricity compared.....VII 216
 Of water.....VII 217
 Increase of.....VII 213
 In high buildings.....VII 211
 Labor and.....VII 212
 Niagara, cost of.....VII 223
 Use of.....VII 221
 Number of, establishing, using.....VII 213
 States of union, in various.....VII 233
 Statistics of, comparative.....VII 230
 Steam, total, of.....VII 214
 Value of product and.....VII 213
 Varieties and quantities, of, in U. S.....VII 210
 Water, and electricity.....VII 219
 Changes in.....VII 218
 In California.....VII 360
 In Connecticut.....VII 227
 In the South.....VII 227
 In Washington state.....VII 225
 Increase of.....VII 219
 Of the lakes.....VII 226
 Powers, L. Grand.....
 Fifty years of American agriculture.....V 36
 Pratt, Joseph Hyde.....VI 430
 Abrasive materials.....VI 430
 Barytes.....VI 443
 Mica.....VI 361
 Steel hardening metals.....VI 177
 Talc and soapstone.....VI 424
 Precious stones.....
 (G. F. Kunz).....VI 124
 Preserves, fruit.....
 Adulterated.....X 284
 President, the.....
 Agreements, authorized to make.....II 218
 Civil service, part of, in.....II 412
 Duties of, Justice Marshall on.....II 66
 Hague tribunal, can submit cases to.....II 212
 Treaty, power of, in.....II 208
 Power, from senate, must guard his.....II 205
 Powers of, growth of.....II 204
 Press, the (see newspapers).....
 Presses printing (see printing and newspapers).....
 Priestly, Neville.....
 Railroads, on.....IV 242
 Princeton, cruiser.....IX 301
 Printers.....
 Union label and.....VIII 184
 (See type setters).....
 Printing.....
 And publishing, (W. S. Rosser).....I 380
 Artistic progress.....I 384
 Colors.....I 383
 Goodson graphotype.....I 381
 Hoe's inventions.....I 370
 Invention of (see also newspapers).....I 370
 Machinery benefit to labor.....I 384
 Mergenthaler's idea.....I 381
 Paper used for.....I 385
 Presses, perfecting.....I 382
 Progressive efforts of.....I 386
 Scudder monoline.....I 381
 Stereotyping.....I 382
 Type founding, modern.....I 382
 Typesetting machines.....I 380
 Wages affected by machines.....I 381
 (See also advertising).....
 Prisons.....
 Philanthropy and.....X 41
 (See also crime).....
 Pritchett, H. S.....
 Industrial and technical education.....I 133
 Industrial and technical training in popular education.....I 134
 The educated man and the state.....I 234
 Privateers.....
 Napoleonic wars, in.....II 163
 Prize cases.....
 Supreme court, power of.....II 90
 Problems before the nation.....
 (Theodore Roosevelt).....II 452
 Produce exchanged (see speculation)
 Production.....
 American, early.....IV 33-4
 Cheap, problems of.....VIII 360
 Economy of, American.....IV 52
 Hawaii, increased, of.....IV 45

- Production—Continued.
 Immigration and.....VIII 241-2
 Integration and economy of.....III 63
 Machinery and.....VIII 272
- Potatoes.....
 Production, American and
 world's, compared.....III 2
- Production.....
 Gold and silver, world's, in 400
 years.....IV 48
 Statistics of American since 1870.....IV 34
 Tropics, American, in the.....IV 44
 United States leads world
 in.....IV 35-6
- Profit sharing.....
 (N. P. Gilman).....VIII 302
 Cleveland Cliffs Iron Co.....VIII 335
 National Cash Register Co.....VIII 336
 Plan, N. O. Nelson's.....VIII 334
 (See also wages).....
- Promoters.....
 Assembling a proposition.....III 235-6
 Capital assembled by.....III 233
 Demands on.....III 235
 Experts, rely on.....III 235
 Floating a proposition.....III 237
 Gates, John W., as a.....III 234
 Good for all parties.....III 240
 Industry, their contribution to.....III 238
 Knowledge, acquire technical.....III 235
 Moore, W. H., as a.....III 235
 Profits justified, share of.....III 242
 Right of, to their.....III 239
 Qualities of a good.....III 234
 The work of the, (Edward S.
 Meade).....III 231
 Typical case, essentials of a.....III 238
- Property.....
 Labor solidarity, and.....VIII 429
- Prosopite.....VI 338
- Protection.....
 In U. S., (A. Maurice Low).....II 312
 (See also tariff).....
- Protocol.....
 Lake Erie reef, ceding.....II 225
 Spain, with, in 1877.....II 226
 Spanish war, nature of, in.....II 225
 Turkey in 1830.....II 226
- Prouty, Charles A.....
 Control of railway rates.....IV 348
- Provisions.....
 Chicago, shipments east from.....III 363
 (See also packing).....
- Prunes.....
 American, first.....V 245
 Production.....V 245
- Prussia.....
 British blockade of.....II 166
 Treaty with, early American.....II 160
- Prussic acid (see mining).....
- Psychology.....
 Growth of.....VII 13
- Publishing (see printing and news-
 papers).....
- Pullman George M.....
 Railway car, invented.....IV 391
 Town of.....VIII 328
 (See also railway cars).....
- Pumice.....VI 436
- Puritan, monitor.....IX 293
- Puritans.....
 U. S., in.....I 16
- Purviance, A. J.....
 Patents of.....V 86
- Pyrite.....
 (J. Struthers).....VI 348
 Deposits of, U. S.....VI 355
 Occurrence of.....VI 355
 U. S., in.....VI 356
 Uses of.....VI 357

Q

- Quartz.....VI 339, VII 436
- Quicksilver.....
 (J. Struthers).....VI 289
 American deposits.....VI 294
 Production.....VI 294
 History, early.....VI 289
 New Mexico industry.....VI 296
 Occurrence of.....VI 291
 Ore of.....VI 293
 Oregon, industry of.....VI 295
 Properties of.....VI 289
 Uses of.....VI 292
 Commercial.....VI 293
 Vermilion.....VI 292
- Quincy, Josiah.....
 Supports navy.....IX 218

R

- Race problem (see negroes).....
- Race question, the.....
 (See negroes).....
- Races.....
 Ability of.....I 15
 Acclimatization of.....I 50
 Agriculture and.....I 16
 Climatic adaptability.....I 49
 Competition and.....I 60
 Crime and.....X 134
 Democracy incentive to energy.....I 53
 Economic foresight.....I 57
 Energy of.....I 51
 Genius and.....I 61
 Germans in U. S.....I 15
 Government and.....I 52
 Heredity, fallacies of.....I 48
 Huguenots in U. S.....I 16
 Immigration, improved by.....I 51
 In America (see population).....
 Indo-Germanic.....I 9

Races—Continued.

Martial superiority.....	I 60
Mexican war and.....	LX 40
Mongols, assimilating power of.....	I 50
Moral excellence.....	I 62
Standard of, rising.....	I 66
Northern, superiority of.....	I 49
Pride of blood.....	I 64
Puritans in U. S.....	I 16
Causes of race superiority, (E. A. Ross).....	I 48
Self-reliance and.....	I 54
Standard of comfort and.....	I 66
Statures, comparative.....	I 51
Thrift and.....	I 56
U. S., different, in.....	I 14

Rae, J. H.....
Cyanide process, inventor of.....VI 230

Raftery, John H.....
Largest farm in world.....V 324

Rails (see steel).....

Railroad cars (see cars).....

Railroads

Accidents.....	IV 232
Advertising, benefit of, to commerce.....	IV 209
Agriculture, western and.....	IV 210
And growth of.....	V 44
American, compared with foreign.....	IV 206
Early, and industry.....	III 26
Pathways, early.....	IV 270
Models for foreign.....	IV 205
Statistics of.....	IV 220
Travel, ease of.....	IV 219
Boston & Albany, ownership of.....	III 332
Boston & Maine, ownership of.....	III 332
Bridge supervisor, duties of.....	IV 379
Bridges, American, abroad.....	IV 203
Building materials, discrimination in.....	IV 263
Canadian Pacific, completion of.....	IV 277
Capital, early, for.....	IV 236
Invested in.....	III 103
Of, concentration of.....	III 55
Vast new, needed.....	IV 238
Capitalization of pooled roads.....	IV 329
Car accountant, duties of.....	IV 381
Cars, development of, (G. A. Hutchins).....	IV 390
Early history of.....	IV 390
Central and Union Pacific, completion of.....	IV 276
Improved, routes of.....	IV 280
Charges, minimum of.....	IV 261
Chemistry, in.....	VII 85
Chicago and Great Western, ownership of.....	III 332
China and Russia, rates and wages in.....	IV 214
Civilization, followed by.....	IV 207
Civilizers, as.....	IV 242

Railroads—Continued.

Claim department, work of.....	IV 373
Association, work of international.....	IV 377
Coal and.....	IV 333, VI 189
Transported by.....	VI 190
Colorado Midland route.....	IV 282
Combination, remedies for.....	IV 350
Companies, number of.....	IV 229
Competition for markets.....	IV 263
In rates.....	IV 226
Consolidation of.....	III 71
Backward in.....	III 74
Constitution, and the.....	II 72
Protected by.....	IV 353
Construction department, duties of.....	IV 371
New.....	IV 372
Copper in the West, and.....	IV 292
Cotton trade, and.....	IV 266
Court decisions defied.....	IV 350
Cuban.....	II 310
Debt to, the nation's (J. J. Hill).....	IV 253
Denver & Rio Grande, building of.....	VI 277
Engineering of.....	IV 280
New route of.....	IV 282
Departments of law, real estate, and taxes.....	IV 372
Development, post-bellum.....	IV 221
Of American.....	IV 234
Directors, statistics of.....	III 343
Distances, magnificent American.....	IV 216
Division superintendent, duties of.....	IV 378
Early importance of.....	IV 295
Earnings and investment.....	IV 261
Increase of.....	III 478
Increased.....	IV 326
Of American.....	IV 206
Elevation and increase of tracks.....	IV 236
Employees' earnings.....	IV 230
Interest of, in.....	IV 226
Laws protecting.....	VIII 52
Number of.....	IV 223
England the birthplace of.....	IV 234
Ericsson, John, and.....	IV 235
Evans, Oliver.....	IV 235
Evils of discrimination.....	IV 317
Exchange, facilitate.....	IV 248
Export trade, and.....	IV 235
Fares, service, and wages.....	IV 211
Financing, early, of.....	IV 221
Finance methods, English.....	IV 224
Proposed new.....	IV 224
Flour monopoly and.....	IV 336
Foreign trade, and.....	IV 266
Freight.....	
Cars capacities of.....	IV 208
Charges, American and foreign.....	IV 214
Claims, magnitude of.....	IV 377
Department, work of the.....	IV 375

Railroads—Freight—Continued.

- Handling, speed of.....IV 209
- How, it is billed.....IV 376
- Rates, American and European.....IV 256
- Statistics.....IV 229
- Traffic, annual.....IV 232
- Transportation, cost of.....IV 220
- Equalizing cotton.....III 215
- Government control of, (M. H. Smith).....IV 316
- Only adequate power to deal with.....IV 341
- Opposition of, to.....IV 316
- Opposition to.....IV 352
- Ownership of.....IV 257
- Government ownership.....
 - (Martin A. Knapp).....IV 355
 - Its curable by.....IV 357
 - Need of.....IV 348
 - Objection to.....IV 356
 - Politics in.....IV 356
- Grain monopoly and.....IV 334-5
- Granger laws.....IV 209
- And construction.....IV 302
- Benefits of.....IV 306
- Depression of, and.....IV 304
- Earnings and.....IV 303
- Repeal of.....IV 305
- "Granger legislation" against.....IV 222
- Great Northern system, needs of.....IV 261
- Greatest impetus in America.....IV 236
- Growth, country's, since 1830.....IV 237
- Part of, in American commercial.....IV 199
- Post-bellum.....III 372
- Since 1827.....IV 228
- Health, general and.....IV 245
- High rates, power of, to maintain.....IV 328
- History of, American, early.....IV 217
- Early, in America.....IV 235
- Home, food, and clothing, and.....IV 249
- Illinois Central, opening of.....IV 237
- Owners of.....III 332
- Planned.....III 27
- Income and outgo.....IV 230
- Industries, creators of new.....IV 251
- Interference with, right of states to.....IV 312
- Interstate commerce law.....IV 222, 257
- Creation of.....IV 319
- Interstate commission crippled.....IV 320
- Report for 1898.....IV 321
- Law, proposed amendment of.....IV 259
- Isthmian canal, and.....IV 192
- Japanese trade, effect on.....IV 265
- Labor and prices, effect of, on.....IV 256

Railroads—Continued.

- And labor.....VIII 408
- American superintendence of.....III 254
- Labor's debt to, (G. M. Walker).....VIII 408
- LaFollette's plan for control of.....IV 345-6
- Laws, crudeness of.....IV 225
- Should be enforced.....IV 315
- Legislation of 1902 a failure.....IV 322
- Life, have intensified.....IV 244
- Living, have changed.....IV 246
- Locomotives, American, abroad.....IV 201
- And cars, number of.....IV 229
- Hauling power of.....IV 208
- Lumber industry, and growth of.....III 359
- Management of, sound.....IV 261
- Master mechanic, duties of the.....IV 381
- Materials of industry, and.....IV 247
- Meat monopoly and.....IV 336
- Mileage, American, greatest.....VII 271
- And progress.....IV 206
- And value of.....IV 251
- Increase by stages.....IV 250
- More needed.....IV 226
- Yearly, of.....IV 229
- Mining industry, as help to.....IV 211-13
- Stimulated by.....IV 290
- Missouri first to charter transcontinental.....IV 275
- Trans-Missouri case.....IV 223
- Monopolies as.....IV 349
- Makers of.....IV 318
- Nature of.....IV 350
- Neville, Priestley.....IV 242
- Northern Pacific a military road.....III 371
- Route of.....IV 285
- Northern securities prosecution.....III 216
- Ogden City of.....IV 279
- Operation, statistics of.....IV 228
- Opposition to, early.....IV 208
- Organization, (G. T. Sampson).....IV 367
- Organization, of the Central Pacific and Union Pacific.....IV 275
- Charts of.....IV 369
- Oriental trade, and.....IV 265
- Overcharges, remedy for.....IV 352
- Ownership of, and the law.....IV 260
- Change of.....III 391
- Degree of diffusion of.....III 398
- Eastern, widely diffused.....III 393
- Individual.....III 395
- Stock, diffuse.....III 439
- Pacific coast, lumber.....IV 264
- Railroads, general effects of.....IV 292
- Passenger rates, basis of.....IV 226
- Department, work of the.....IV 373
- Statistics.....IV 229
- Past, present, and future of
 - American, (M. E. Ingalls).....IV 217
- Pennsylvania law of 1873.....IV 333
- Plants, maintenance of.....IV 371

Railroads—Continued.

Porto Rican.....	II	298
Postal service, and.....	IV	249
Power of, vast.....	III	54
Preferential rate law.....	IV	323
Prime importance of.....	IV	255-6
Problem, (A. B. Stickney).....	IV	298
Problems, early American and European.....	IV	237
Prosperity, depends on popular.....	IV	263
Publicity, need of.....	IV	225
Rates, control of (C. A. Prouty).....	IV	348
Are made, how.....	IV	262
Constantly increased.....	IV	324
For staples, need of low.....	IV	225
Increasing cheapness of.....	IV	241
Unjust.....	IV	350
Rebate injunction of 1904.....	III	212
Rebates.....	IV	334
Railway regulation, (R. M. La Follette).....	IV	294
Regulation, need of.....	IV	310
Reorganization of, continual.....	IV	367
Revenues, distribution of.....	IV	231
Roadmaster, duties of.....	IV	378
Rochester, and growth of.....	IV	209
Rocky mountain grades of.....	IV	277
Russian, and American machin- ery.....	VII	202
Extension of.....	IV	207
Safety of travel.....	IV	231
St. Paul, Minneapolis and Mani- toba.....	IV	287
Santa Fe built.....	IV	278
Albuquerque branch of.....	IV	284
Ownership of.....	III	333
Route of.....	IV	283
Section foreman, duties of.....	IV	379
Service, American and foreign.....	IV	213
Share holding in different states, average.....	III	339
Shops, organization of.....	IV	382
Siberian, trans. and American steel.....	IV	201
Six great groups of, the.....	IV	329
Social and economic effects.....	IV	244
Southern Pacific and Texas Pacific, opening of the.....	IV	276
Route of.....	IV	282
Speed, American, and other train facilities.....	IV	214
Standard oil, and.....	III	53
Manipulated by.....	III	173-5
State, commission proposed.....	IV	313
States, new and.....	III	373
Were first to control.....	IV	298
Station agents, duties of.....	IV	380
Stock and share holders, tables of.....	III	334
Average holdings of.....	III	336
Stockholders, number of, increas- ing.....	III	337

Railroads—Continued.

Suburban homes, and.....	IV	245
Supreme court on.....	IV	318
Taxing laws.....	IV	223
Telegraph lines and.....	IV	481
Tickets, how handled.....	IV	374
Threaten industries.....	IV	331
Time saved by.....	IV	210
How multiplied.....	IV	245
Trade unions and.....	VIII	209
Traffic, British and American.....	IV	240
Canal and river traffic, statistics of.....	IV	239
Manager, duties of the.....	IV	376
Increased, rates higher.....	IV	325
Train crews, duties of.....	IV	380
Dispatcher, duties of.....	IV	375
Transcontinental lines.....	IV	270
Distances, table of.....	IV	288
Capital and debt of.....	IV	290
First needs for.....	IV	274
First, proposed.....	IV	274
Routes, earliest.....	IV	274
Surveys, first.....	IV	274
Transportation companies, pow- ers of.....	IV	296
Department, organization of.....	IV	377
Problem in N. Y.....	IV	452
Trust breeders, as.....	III	53
Trusts, grew like.....	III	83
Rebates the cause of.....	IV	351
Union and Central Pacific mili- tary.....	III	371
Vice and.....	IV	245
Wages.....	IV	327
Wall street, power of.....	III	57
Watered stock, profits on.....	IV	354
Western commerce, and.....	III	303
Topography of.....	IV	278
Who owns the, (Solomon Hueb- ner).....	III	330
Willcox, John B., and.....	IV	234
Wisconsin commission, causes of.....	IV	309
Earnings in.....	IV	308
Law of 1903 defeated.....	IV	307
Law regulating.....	IV	301
Rates.....	IV	307
(See also bridges, commerce, inter- state).....		
Railroads (electric).....		
Arnold's, Bion, J., predictions.....	IV	447
Birth of electric traction.....	IV	442
Commutator, use of the.....	IV	447
Construction, principles of.....	IV	443
Electric company, general.....	IV	443
Growth of, rapid.....	IV	444
Inventions in.....	VII	139
Locomotive, the electric.....	IV	444
Past, present, and future of elec- tric traction, (Frank J. Sprague).....	IV	442

Railroad—electric—Continued.

- Pennsylvania and New York
 Central, equipment of.....IV 446
 Power used by, amount of.....VII 211
 Richmond, first at.....IV 442
 Sprague's multiple unit system.....IV 445
 Thomson-Houston, development of.....IV 443
 Third rail for elevated.....IV 445
 Trunk lines not probable.....IV 447
- Railroads, (interurban).....
 (Edward Dana Durand).....IV 418
 Causes of.....IV 419
 Central states, of.....IV 420
 Chicago system.....IV 422
 Cities, to, most profitable.....IV 430
 Classification.....IV 417
 Country merchant, hurt the.....IV 432
 Opinions of.....IV 433
 Detroit system.....IV 421
 Distance travel by, long.....IV 437
 Earnings of, annual.....IV 422
 And car-mileage.....IV 423
 And population.....IV 425
 Growth of.....IV 424
 Electric, advantages of.....IV 427
 Fares, comparative.....IV 427
 Farmers, patronized by.....IV 429
 Freight carriers.....IV 431
 Mail, and express business of.....IV 423
 Future of.....IV 440
 Increased travel from.....IV 429
 Indianapolis system.....IV 421
 Lake Erie system.....IV 420
 Limited service.....IV 431
 Massachusetts systems.....IV 419
 Mileage of Connecticut.....IV 418
 Indiana.....IV 418
 Maine.....IV 418
 Massachusetts.....IV 418
 Michigan.....IV 418
 New Hampshire.....IV 418
 Ohio.....IV 418
 Pennsylvania.....IV 418
 Virginia.....IV 418
 Nature of.....IV 416
 New England and middle states, of.....IV 419
 Operating expenses.....IV 424
 Pleasure, used for.....IV 430
 Small towns, effects on.....IV 432
 Social importance of, growing.....IV 426
 Steam changed to electric.....IV 440
 Conversion of, to electric, growing.....IV 440
 Difference between electrical and.....IV 426
 Fares, have reduced.....IV 437
 Lines, competition met by.....IV 439
 Railways, counter-policy of.....IV 438

Railroads—interurban—Continued.

- Roads, hurt local help through traffic of.....IV 437
 Traffic, affected.....IV 435
 Wheeling-Indianapolis chain of.....IV 421
- Railroads (underground).....
 Proposed, first, for N. Y. city.....IV 454
 New York subways, (James Creelman).....IV 451
 Tunnel under Hudson, Pennsylvania, \$50,000,000.....IV 451
 New York subway.....
 And municipal ownership.....IV 452
 Bids for construction of.....IV 455
 Bill for.....IV 455
 Building of.....IV 451, 457
 Capital raised.....IV 456
 Capacity of.....IV 431
 Cost of.....IV 456
 Per mile.....IV 459
 Equipment of.....IV 459
 Difficulties of tunneling.....IV 453
 Financing of.....IV 452
 Laying out route.....IV 455
 Mayor Hewitt plans, in 1888.....IV 454
 Municipal ownership of.....IV 455
 New, proposed.....IV 452
 Present owners of.....IV 457
 Route of.....IV 458
 Trains and fare of.....IV 456
 New York city, history of transit in.....IV 453
 Tunnel, Beach's N. Y., of 1868.....IV 454
- Rainfall.....
 United States, of.....IV 26
- Raisins.....
 (G. C. Hussman).....V 252
 American, first.....V 258
 California, first.....V 244
 Climate and irrigation.....V 259
 Grape and, production, in U. S., (G. C. Hussman).....V 252
 Picking and packing.....V 260
 Production, earlier.....V 258
 And profits.....V 259
 Yearly.....V 261
- Ramsay, A.....
 Glacial theory of.....VII 52
- Randall, Abraham.....
 Reaper of.....V 85
- Randolph, Governor.....
 Veto powers proposed by.....II 79
- Randolph, Jacob, surgeon.....VII 431
- Raton.....
 Electric power at mines of.....VI 39
- Reaping machinery.....
 (See agricultural machinery).....
- Reciprocity.....
 American policy.....II 146
 Blaine, work of.....II 381
 Dingley law and.....II 381

Reciprocity—Continued.

Expansion through. (John Ball Osborne).....	II 375
France, with, in 1898.....	II 217
Function true of.....	II 390
Harrison's administration, in.....	II 379
Hawaiian, treaty.....	II 378
Jamaica treaty, opposition to.....	II 386
Kasson treaties.....	II 384
Criticism of.....	II 388
Soundness of.....	II 389
McKinley.....	II 375
Marcy-Elgin treaty.....	II 378
Navigation, of 1818.....	IV 93
Porto Rico, with, in 1902.....	II 217
Retaliation, by Europe.....	II 390
Tariff, a remedy for.....	II 378
When should be removed.....	II 377
Treaties, various.....	II 379
Red Cross association.....	
Work of.....	X 81
(See also relief).....	
Reed, Jonathan.....	
Reaper of.....	V 86
Reform.....	
Cities, need of civil service in.....	II 119
Folk, J. W.....	X 307
Political evolution and civil service reform, (H. J. Ford).....	II 406
(See also civil service, tariff, charity, crime, prisons).....	
Reformatories.....	
Abuses in.....	X 264
Drake L. D., on.....	X 262
History.....	X 262
Model.....	X 267
Training, manual in.....	X 265
(See also crime).....	
Reid, Whitelaw.....	
Strength of the republic.....	II 443
Reis, Philip.....	
Telephone, inventor of.....	VII 138
Relief.....	
Army aid in disasters.....	X 83
Organization for quick.....	X 79
Quick action needed.....	X 79
Red Cross association, work of.....	X 81
Trained agents needed.....	X 78
Varieties of emergency.....	X 78
Relief, poor.....	
(Emil Munsterberg).....	X 139
Agencies for.....	X 155
Children, aiding.....	X 162
Conferences for.....	X 141
Crippled children.....	X 159
Defectives, care of.....	X 157
District of Columbia.....	X 145
Emergency, in disasters, (E. T. Devine).....	X 77
Expenditures for, in N. Y.....	X 146
Immigrant settlements.....	X 152
Immigration.....	X 150

Relief, poor—Continued.

Indemnity for disasters.....	X 81
Indiana.....	X 145
Indoor and outdoor.....	X 152
Jewish.....	X 172
Literature of.....	X 139
Martinique disaster.....	X 86
Maryland.....	X 145
Medical.....	X 159
Money undesirable as.....	X 85
National conference plans.....	X 141
New York board methods.....	X 144
State aid association.....	X 148
Outdoor, preferable.....	X 154
Public and private.....	X 153
Salvation army and.....	X 173
State aid.....	X 163
Board corruption.....	X 143
Boards, powers of.....	X 147
Reports of.....	X 146
System in need.....	X 179
Unemployed, the.....	X 156
Uniformity-non, of.....	X 149
(See also charities).....	
Religion.....	
Colleges and.....	I 172
Education and the church.....	I 71
And, (A. T. Hadley).....	I 267
Immigration and.....	I 18
Race superiority and.....	I 62
Remington typewriters.....	VII 367
Remsslaer institute.....	VII 298
Remsslaer, Stephen.....	
War of 1812, and.....	IX 32
Representation.....	
Basis of second apportionment.....	II 43
Struggle over.....	II 37
Beginnings of representative government, (E. J. James).....	II 35
Congress, discussion by first.....	II 41
Census, provision for, by second congress.....	II 50
Constitution and.....	II 49
German principle of.....	II 38
House of representatives to fix, right of the.....	II 46
Method of, adopted by second congress.....	II 43
New basis of.....	II 54
Senate, opposition of, to basis of.....	II 50
Opposition of, to second apportionment.....	II 42
Second apportionment vetoed.....	II 43
Bill for, in congress.....	II 42
States in.....	II 40
Storey, opinion of, on Washington's veto.....	II 54
Veto of bill, text of Washington's.....	II 51
Washington, veto of, of apportionment bill.....	II 49

- Republican party, the.....II 392
 Prosperity and.....II 443
 Strength of, (W. Reid).....II 443
 Tariffs and.....II 329
 Revolution, the American.....IX 13
 Army of, (J. S. V. Paddock).....IX 13
 Organization of.....IX 16
 British military policy.....IX 18
 Burgoyne's campaigns.....IX 19
 Campaigns of, the principal.....IX 14
 Canada, conquest of.....IX 15
 Loyalty of.....IX 18
 Causes of.....IX 14
 Crises of.....IX 20
 Foreign aids to.....IX 18
 Fought in the North.....IX 20
 Navy of, (C. O. Paullin).....IX 200
 Review of.....IX 21
 State of, in 1776.....II 10
 State of, in 1776, (Ida M. Tarbell).....II 10
 Yorktown, siege of.....IX 21
 Rhode Island.....IX 302
 Battleship.....IX 302
 Constitution, accepts.....II 60
 Manufactures of, early.....IV 101
 Rhoads, E., physician.....VII 421
 Ricarte, Artemio.....IX 77
 Rice.....V 287
 (Daniel C. Roper).....V 287
 Belt, the American.....V 288
 Civil war, influence of.....V 288
 Crops, first American.....V 21
 Grading of.....V 290
 History, early.....V 287
 Improvement of.....V 411
 Loss from milling imperfections.....V 291
 Milling methods, modern.....V 289
 Primitive.....V 289
 Oil as fuel in, industry.....V 288
 Production, recent.....V 288
 Richards, J.....VIII 275
 Skilled labor.....VIII 275
 Wages of skilled labor.....VIII 275
 Richardson, W. G.....IX 350
 Naval academy.....IX 350
 Ridgely, William Barret.....III 441
 Government control of banks.....III 441
 Rifles (see guns).....IX 397
 Rights.....III 311
 Citizens' in industry.....III 311
 Rilleux, Norbert.....V 213
 Sugar evaporation, method of.....V 213
 Ripley, E. W.....IX 397
 Sword of.....IX 397
 Rivers.....II 168
 Navigation, free, of.....II 168
 Trade on American.....IV 30, 152
 Traffic on American, statistics of.....IV 239
 United States, of.....IV 28
 (See also steamboats).....
 Rives, Amelle.....I 366
 Roads.....III 9
 Gallatin's report.....III 9
 Porto Rican.....II 208
 Turnpike companies, early.....III 38
 (See also railroads, canals, transportation).....
 Roberts, Ellis H.....VI 242
 Inflow of gold.....VI 242
 Strength and weakness of American finance.....III 392
 Roberts, Mrs. Marshall O., philanthropist.....X 219
 Robinson, Maurice H.....III 102
 Investigating trust problem.....III 102
 Rock crystal.....VI 339
 Rockefeller, John D.....IV 352
 Golden rule, and.....IV 352
 Power in railroad world.....IV 345
 Rodgers, gunboat.....IX 300
 Roeder, E. F.....VII 140
 The development of industrial electro-chemistry.....VII 140
 Roe, Gilbert E.....III 459
 Insurance investigation.....III 459
 Rogers, Howard J.....III 300
 Relation of education to commercial and industrial development.....III 300
 Rolfe, John.....V 278-9
 Tobacco grower, first.....V 278-9
 Roman Catholic.....I 209
 Education, need of higher.....I 209
 Universities (J. F. Mullaney).....I 207
 Central.....I 207
 European, of.....I 207
 Founding of the.....I 208
 Functions of.....I 212
 History.....I 213
 Improvement of the.....I 216
 Purpose of.....I 208
 Spread of.....I 211
 Universality of.....I 215
 Roosevelt, Theodore.....II 122
 Law, as enforcer of.....II 122
 Monroe doctrine, 1903 speech of.....II 159
 Peace, message on.....II 156
 Trusts.....II 453
 First message on.....III 204
 Upbuilding of the navy.....IX 273
 Wall street, check on.....III 382
 Roosevelt, Nicholas J.....IV 154
 Root, Elihu.....IX 109
 General staff of the army.....IX 109
 Roper, Daniel C.....V 129
 Cotton machinery.....V 129
 Rice.....V 287
 Rosebery, Lord.....IV 54
 American industry.....IV 54
 Trusts.....IV 55

- Ross, Edward A.
 Race superiority.....I 48
 Ross, William A., sociologist.....VII 100
 Rosster, William S.
 Printing and publishing.....I 380
 Rothschilds, the.....
 Hessians, the, and the.....III 408
 Royce, Frederic.....
 Submarine telegraphs.....IV 487
 The new navy.....IX 288
 Rubies (see corundum).....
 Rum.....
 Molasses act of 1733.....IV 84
 Rush, Benjamin.....VII 407
 Russell Walter, physician.....VII 402
 Russia.....
 American Chinese trade, relation
 of, to.....II 133
 Cotton in.....V 144-5
 Lawyers in.....II 100
 Transportation charges and
 wages in.....IV 214
 Wheat production.....V 147
 Rutile.....VI 180
 Rutledge, Edward.....
 Debate of, on colonial freedom.....II 13
 Rye.....
 American crops, first.....V 21
 Area and production.....V 5
 Production.....V 30

S

- St. Clair, Arthur, soldier.....IX 2-3
 St. Louis.....
 Cruiser.....IX 302
 Manual training school, site of
 first.....VIII 421
 Mounds of.....VII 42
 Packing center as.....V 177
 Salesmen.....
 Number of, in U. S.....IV 500
 Services of.....IV 507
 The American, (E. W. de Bower).....IV 506
 Types of.....IV 509
 Volume of business.....IV 508
 Saloons.....
 Danger of gilded.....II 117
 Drunkenness and.....X 183
 Salt.....
 Miners, work of.....VI 19
 Saltus, Edgar.....I 386
 Salvador.....
 Monroe doctrine, British block-
 ades of, and.....II 188
 Salvation army.....
 Irrigation and.....V 352
 Poor relief and.....X 173
 Samoa.....
 American policy in.....II 146
 Sampson, George T.....
 Railroad organization.....IV 367
 San Francisco.....
 Harbor of.....IV 23
 U. S. cruiser.....IX 296
 San Juan Hill.....
 Battle of.....IX 70
 Sanborn, Edward H.....
 Development of metal working
 machinery.....VI 233
 Power employed in American
 manufactures.....VII 210
 Sandys, George, writer.....I 350
 Sanitation.....
 American shops, in.....VIII 14
 Cuban.....II 304
 Lecky, on.....X 195
 Santa Fe railroad.....
 Ownership of.....III 333
 Santa Monica, Calif.....
 Home for soldiers at.....IX 427
 Santiago.....
 Landing of troops at.....IX 68
 Santo Domingo.....
 Spanish sovereignty of, and
 American protest.....II 178
 Sapphires (see corundum).....
 Sargent, Frank P.....
 Problems of immigration.....II 437
 Sault Ste. Marie.....
 Tonnage.....IV 145
 Sausage (see packing).....
 Saws, pneumatic.....VII 251
 Seward, Frederick E.....
 Connellsville coke region.....VI 193
 Saxe, John G., poet.....I 361
 Saylor, Charles F.....
 Beet sugar industry of U. S.....V 227
 Sayre, Lewis A., surgeon.....VII 432
 Scholars.....
 In Europe.....VII 21
 Scholarship, American.....I 200
 Popularizing fruits of.....I 204
 Schools (see education).....
 Schwab, Charles M.....
 Carnegie's enterprises.....VI 147
 Steel trust, the.....III 68
 Science, American.....
 (E. S. Holden).....VII 58
 Advancement, general.....VII 4
 American association for ad-
 vancement of.....VII 1
 Journal of, foundation
 of.....VII 60
 Sociologist, (M. A. Lane).....VII 91
 And invention.....VII 7
 Anthropology.....VII 19
 Army officers in.....VII 62
 Astronomy in U. S., (Simon
 Newcomb).....VII 67
 Bacteriology.....VII 18

Science, American—Continued.

Burbank, L., work of.....	VII 106
Chemistry.....	VII 14
In U. S., (F. W. Clarke).....	VII 84
Coast survey, beginning of.....	VII 57
Debt of world to pure, (J. J. Stevenson).....	VII 24
Department of agriculture, work of.....	VII 43
Electric light, (Louis Bell).....	VII 154
Endowments for.....	VII 38
Engineering, progress of.....	VII 290
Expenditures, government.....	VII 40
Fifty years of, (W. J. McGee).....	VII 1
Franklin, B., work of.....	VII 109
Geology.....	VII 16
Geology, (Rozelle P. Handy).....	VII 47
Government patronage.....	VII 40
Gould's Journal.....	VII 60
Growth of nation and.....	VII 2
Hewitt, electrical achievements of.....	VII 183
History, early.....	VII 56
Of electricity in U. S., (G. H. Stockbridge).....	VII 109
Industrial electro-chemistry, (E. F. Roerber).....	VII 140
Invention of telephone, (A. G. Bell).....	VII 171
Investigation, methods of.....	VII 35
Langley, work of.....	VII 4
Metals and precious stones, discoveries in.....	VII 45
Meteorology.....	VII 10
Naval academy, and.....	VII 59
Obstacles to, early.....	VII 2
Pelce, work of.....	VII 62
Philanthropy, in.....	X 41
Political economy.....	VII 93
Practical character of.....	VII 41
Progress of.....	VII 1
Psychology.....	VII 13
Scientific work of government, (M. A. Lane).....	VII 40
Smithson's foundation.....	VII 37
Smithsonian institution, work of.....	VII 42
Sociology.....	VII 92
Sturgeon, work of.....	VII 114
Trained Americans in.....	VII 37
Tripler, work of.....	VII 12
Universities, in.....	I 191
Utilitarian-non.....	VII 24
Weather bureau, work of.....	VII 390
Wireless electricity, (N. Tesla).....	VII 163
Zoology.....	VII 17
(See also the several sciences)...	
(See also medicine and surgery)...	
Scotch-Irish.....	
Americans.....	I 20
Composite race.....	I 20
History of.....	I 21

Scotch-Irish—Continued.

Pioneers in U. S.....	I 23
Settlers, early American.....	I 19
Scott, Winfield, soldier.....	IX 7
Scudder, Vida L.....	
Democracy and education.....	I 245
Sculpture (see art).....	
Sage, Russell.....	
Telegraphs, and.....	IV 482
Sailors (see navy, the).....	
Seamen (see navy the).....	
Securities.....	
American influence on, abroad.....	IV 60
Investment abroad.....	IV 47
Maine's, Henry, opinion on.....	II 101
Seeds.....	
Alfalfa.....	V 308
Ailfaria.....	V 322
Areas of, production.....	V 301
Bean, soy.....	V 309
Velvet.....	V 311
Beet, sugar.....	V 322
Beggar weed.....	V 311
Best wheat.....	V 302
Broom corn.....	V 321
Buckwheat.....	V 302
Clover, alsike.....	V 307
Burr.....	V 307
Mammoth.....	V 306
Red.....	V 305
Sweet.....	V 308
Clovers.....	V 303
Garnering rod.....	V 306
Corn for, purposes.....	V 302
Cotton seed.....	V 319
Cotton, (C. M. Daugherty).....	V 115
Cowpes.....	V 309
Distinguished from cereals.....	V 301
Favorable localities.....	V 300
Flax.....	V 320
Fodder.....	V 317
Grass.....	
Beardless brome.....	V 315
Bermuda.....	V 318
Blue.....	V 312, 314
Johnson.....	V 317
Orchard.....	V 313
Rescue.....	V 318
Growth and handling of American, (A. J. Pieters).....	V 299
Hairy vetch.....	V 310
Hemp.....	V 320
Inspection of.....	V 304
Millet.....	V 316
Oats.....	V 303
Pumpkin.....	V 321
Production and value.....	V 299-300
Rape.....	V 321
Rice.....	V 303, 321
Teosinte.....	V 318
Timothy.....	V 312
Tobacco.....	V 319

- Senate, the U. S. II 407
- Degradation of II 407
- Foreign policy, check on II 206
- Hague treaty, ratification of II 208
- Opposition of, in second appointment II 42
- Treaties, veto of, on II 205
- Secession II 29
- Hague treaty, principle of, in II 29
- Senn, Nicholas, surgeon VII 433
- Seward, Secretary VII 433
- Santo Domingo, protest of, against Spanish sovereignty of II 178
- Sewing machines VII 33
- (J. A. Boshard) VII 33
- American, abroad VII 348
- Bachelder's inventions VII 344
- Effects of, on industry VII 349
- Exports, value of VII 350
- Greenough's VII 346
- History, early VII 339
- Howe's invention VII 343
- Hunt's invention VII 342
- Improvements, various VII 347
- Litigation, patent, early VII 346
- Newton and Archbold's VII 342
- Singer's patents VII 345
- Thimmonier's invention VII 341
- Wilson's patents VII 344
- Shafter, General IX 60
- Cuban campaign of IX 60
- Shakespeare II 94
- Lawyers in II 94
- Shaw, Leslie M. III 363
- Commerce and industry of the West III 363
- Shaw memorial I 334
- American art and I 334
- Sheahan, Joseph M. VI 252
- World's supply of copper VI 252
- Sheep V 23
- American, first V 23
- (See also packing) V 23
- Sheffield scientific school VII 301
- Shepard, Charles V 293
- Tea culture and V 293
- Shepardson, Francis W. IX 26
- War of 1812 IX 26
- Sheridan, P. H., soldier IX 10
- Sherman, John T. II 350
- Anti-trust law II 350
- Sherman, Roger II 13, 77
- Colonies, part of, in freeing II 12
- Sherman anti-trust law (see trusts) ..
- Sherman, William Tecumseh IX 55
- March to the sea IX 55
- Succeeds Grant IX 10
- Swords of IX 400
- (See also war, the Civil) ..
- Shields, James IX 393
- Sword of IX 393
- Ships (see also navy, the) IV 68
- Shipbuilding IV 68
- American, early IV 125
- Capacity of American yards IV 125
- Centralization, need of IV 138
- Competition with foreign subsidized ships IV 126
- Cost of, foreign and American IV 127
- Economic difficulties IV 137
- Impetus to IV 132
- England's influence on American IV 122
- Era of, new IV 130
- Experience necessary IV 136
- Foreign trade a stimulus IV 134
- Government help necessary IV 121
- Growth, general causes of IV 130
- Of, quick, in U. S. IV 121
- Isthmian canal, and the IV 120
- Klondike discoveries, influence of IV 129
- Lakes, great, ships of the IV 143
- Maine, early, in IV 101
- Merchant marine, increase of IV 131
- National policy, need of IV 126
- Navy, and the IV 133
- New, the impetus to IV 122
- Ships, first new IV 120
- Neglect, under national IV 132
- New York, Maryland, and Louisiana, early, in IV 101
- Outlook uncertain IV 124
- Physical tests, severity of IV 123
- Present status and future prospects of American, (J. F. Crowell) IV 129
- Product in 1822, total IV 101
- Production, comparative cost of IV 135
- Progress of American IV 119
- Remedies suggested IV 139
- Shops, excellence of American IV 136
- Ships built in lake yards IV 145
- Steam, early American IV 119
- Steel prices a difficulty IV 139
- Tonnage statistics, 1861-1901 IV 131
- Weakness in, American IV 135
- Workmen VIII 13
- (See also commerce, trade, great lakes, navy, the) ..
- Shippen, William, American physician VII 406
- Shoes III 316
- Standardness of the American, (G. Houghton) III 316
- British and American III 296
- Factory system, rise of VII 318
- Floor space, total, of American factories VII 326
- Foreign estimate of American IV 56
- History, early American VII 317
- How the American, have become standard, (George Houghton) VII 317
- Last system, modern VII 323

Shoes—Continued.

- Machine.....VII 320
 Heeling.....VII 321
 Lasting.....VII 319
 Machinery, first.....VII 319
 Manufactured, how.....VII 324
 McKay sewing.....VII 322
 Peg.....VII 319
 Screw.....VII 319
 Power factory, first.....VII 323
 Specialization in making.....VII 322
 (See also boots).....
 Shoemakers.....
 Unions, survival of.....VIII 222
 Sholes, C. Latham, inventor.....VII 366
 Shops, machine, (see machine shops).
 Silk.....
 Cotton a substitute for.....V 138
 Culture, first American.....V 21
 Horsepower in, mills.....VII 214
 Silver.....
 Mining of.....VI 202
 Production world's, in 400 years.....IV 49
 (See also finance, mining).....
 Silver standard.....
 Bland, and.....II 409
 Grant, and.....II 408
 Political parties and.....II 408
 (See also finance, gold standard)
 Simms, William Gilmore, author.....I 357
 Sims, J. Marion.....VII 432
 Singer, Isaac M.....
 Inventor sewing machine.....VII 345
 Sirup (see sugar).....
 Skelton, H. J.....
 National ideals in iron trade.....V 120
 Skidmore, Mrs. W. B.....
 Ladies church union.....X 219
 Skinner, Otis.....
 American theaters.....I 307
 Skyscrapers (see buildings, high).....
 Slaves.....I 9
 Slavery, negro.....
 Georgia cases and Supreme court.....II 84
 Government, and the.....II 444
 Independence, declaration of, in the.....II 19
 Jefferson's condemnation of.....II 19
 Lincoln, on.....VIII 175
 Negroes exchanged for rum.....IV 84
 Representation and.....II 38
 West, its influence on early.....III 19
 Slocum, Samuel, inventor.....VII 329
 Small, Albion W., sociologist.....VII 101
 Sneed, G. L.....
 Institutions for the blind.....X 39
 Smith, Adam.....
 American commerce.....IV 65
 Colonial commerce.....IV 77
 Colonists, success of.....III 13
 Smith, Edwin Burritt.....
 Municipal self government.....II 417
 Smith, James, physician.....VII 407
 Smith, John, author.....I 350
 Smith, Milton H.....
 Government control of railroads.....IV 316
 Smith, Nathan, physician.....VII 411
 Smith, Nathan, surgeon.....VII 429
 Smith, Nathan Ryno, surgeon.....VII 431
 Smith, Rollin E.....
 The mighty river of wheat.....V 147
 Smithsonian institution.....
 Astronomy, and.....VII 62
 Founder, and its.....VII 37
 Work of.....VII 42
 Smyth vs. Ames.....
 Decision in.....II 73
 Snuff (see tobacco).....
 Soapstone.....VI 424
 Mining of.....VI 427
 Occurrence.....VI 426
 Uses of.....VI 429
 Social question, the.....
 Education of business men.....I 218
 Factory, as element in life.....VIII 338
 Machine shop, and mine, (C. B. Going).....VIII 326
 Labor and education, (W. J. Tucker).....VIII 426
 Improving condition of.....VIII 321
 Machine shop conditions, (M. Cokely).....VIII 357
 Machinery and labor, (H. White).....VIII 365
 The social engineer, (W. H. Tolman).....VIII 319
 Universities and.....I 206
 (See also education, wages, sociology, labor, trades unions, socialism).
 Social life reform club.....
 Union labels.....VIII 167
 Social science.....VII 103
 (See also sociology).....
 Socialism.....
 Arbitration, compulsory.....VIII 119
 Capitalists and.....VIII 138
 Democratic.....VIII 136
 Drift toward, American.....VIII 138
 Education and.....I 79
 Future of.....VIII 131
 Gain of, in America.....VII 129
 Hopes of.....VIII 130
 Impracticable.....VIII 130
 Labor, unorganized, and.....VIII 135
 Monopoly, cure for.....VIII 128
 Problems of.....VIII 139

- Socialism—Continued**
 Pullman town and.....VIII 329
 Tendency-non, to.....VIII 328
 Trade unions, attitude of.....VIII 134
 Wages and.....VIII 137
 Ward, Lester F., on.....VII 97
 Woman and.....I 406
 (See also sociology)
Societies, farmers' (see farmers and agriculture)
Societies, secret
 Growth of, (W. W. Phelps).....X 249
 Increase of.....X 251
 List of, with membership.....X 250
 Masons, power of.....X 252
 Membership, total of, in U. S.....X 249
 (See also fraternities, benevolent)
Sociology
 American leaders.....VII 96
 American, (M. A. Lane).....VII 91
 Ellwood, work of.....VII 101
 Federation of rural forces, (K. L. Butterfield).....V 354
 Giddings, work of.....VII 99
 Journals of.....VII 102
 Patten.....VII 98
 Ross, work of.....VII 100
 Small, A. W., on.....VII 101
 Ward, Lester F., work of.....VII 97
Soldiers (see army, the)
Society
 Railroads and.....IV 244
Soil (see agriculture)
 Soley, James Russell
 Naval campaign of 1812.....IX 212
"Soo," the (see Sault Ste. Marie)
South, the
 Activity, post-bellum.....III 372
 Agricultural changes in.....V 385
 Education in.....V 385
 Agriculture, (D. D. Wallace).....V 373
 Conditions of.....V 373
 Needs of, in.....V 385
 Statistics of.....V 379
 American art, and.....I 332
 Commercial development of, (C. M. Harvey).....III 379
 Cotton manufactures in.....III 375
 Recent production of.....III 374
 Evolution of negro labor, (C. Kelsey).....VIII 386
 Farmer, credit of the.....V 387
 History, early industrial.....III 379
 Isthmian canal and trade of.....IV 185-7
 Negroes in agriculture.....V 383
 Presidents, and American.....III 375
 Race problem in.....X 271
 Representation of.....II 49
 In congress.....II 47
 Revolution, American, and.....IX 29
 War, recovery from.....III 374
South, the—Continued.
 Tariff opposed to early.....II 321
South Africa
 Boer war, U. S. intervention in.....II 197
South America
 American trade with.....IV 5
 Cotton trade of.....IV 5
 European trade with.....IV 7-8
 Imports of.....IV 5
South Carolina
 Independence, American, vote of, on.....II 13
South Dakota, cruiser.....IX 302
Southern Pacific
 West, opened the.....III 371
Spain
 Claims commission, Spanish.....II 222
 Cuba, notified to vacate.....II 209
 Santo Domingo, sovereignty of, and American protest.....II 178
Spaulding, George H.
 Binder of.....V 92
Spear, Thomas R., physician.....VII 415
Species
 Origin of.....VII 17
Speculation
 Banks, and.....III 381
 Cliques in U. S.....III 382
 Criminal.....III 381
 European and American compared.....III 384
 Freedom of, in U. S.....III 379
 Gambling in U. S.....III 385
 Gates an all around plunger.....III 390
 Gates, J. W., corner of Louisville stock.....III 380
 Gates-Letter wheat deal.....III 390
 Gates' several corners.....III 390
 Government bureaus, fostered by.....III 388
 Grain, in Chicago.....III 385
 Morgan's, J. P., power.....III 381
 Peril to U. S.....III 386
 Produce exchanges.....III 387
 Progress, its effect on.....III 377
 Wall street.....III 379
 (See also finance)
Speed, John Glimmer
 Cotton.....V 106
Spencer, Herbert
 Education.....VII 313
Spirits (see drunkenness)
Spodumene.....VI 333
Sprague, Frank J.
 Past, present, and future of electric traction.....IV 442
Siberia
 American interests in.....II 245
 Isthmian canal, and.....IV 183
 Railway, trans, and American steel.....IV 201

Sigourney, Lydia H., poetess.....	I 357
Stael, Mme. de.....	VII 91
Germans.....	VII 91
Stage, the (see theaters).....	
Standard oil.....	
Agreement of the Pennsylvania railroad and Empire Trans. Co.....	III 183-4
With the Erie and New York Central.....	III 183
With the Pennsylvania, N. Y. Central, and Erie roads.....	III 177
With Pennsylvania railroad.....	III 185
With producers.....	III 191
Alliances of 1880.....	III 187
B. and O. railroad used.....	III 174
Banks and.....	III 418
Beginning of.....	III 172
By-products, development of.....	III 201
The uses of.....	III 201
Capital increased in 1872.....	III 180
Capitalization of 1892.....	III 193
Combination, first effort at.....	III 173
Competition, first attempts to crush.....	III 174
Competitor, its present.....	III 202
Congress ordered investigation.....	III 179
Consolidation of U. S. Pipe and National Transit Co's.....	III 195-6
Discoveries, oil.....	III 176
Discrimination, railroad.....	III 171
Of 1887.....	III 192
Empire Co., helps the.....	III 186
War on the.....	III 184
Erie railroad and.....	III 175
Foreign trade of.....	III 202
Freight rates appear.....	III 174
Great lakes as a lever.....	III 175
Interstate commerce act.....	III 192
Legal forms unimportant.....	III 198
Methods of rule, present.....	III 199
Monopoly complete in 1877.....	III 185
National Transit Co., formation of.....	III 189
Ohio and Pennsylvania companies combine.....	III 180
Ohio, attacked by.....	III 193
Answered.....	III 194
Court, condemned by.....	III 195
Grounds of.....	III 193-4
Panic of 1872.....	III 179
Pennsylvania railroad, victory over the.....	III 186
Pennsylvania Transportation Co. organized.....	III 181
Pipe line system, first.....	III 181
Development of.....	III 182
Period from 1887 to 1892.....	III 193
Position in 1879.....	III 186
Prosperity and power, present.....	III 202

Standard oil—Continued.

Price, average, for 20 years.....	III 147
Of crude.....	III 145
Decrease of, from 1892.....	III 193
Early oil.....	III 173
How regulated.....	III 198
Producers Co. absorbed.....	III 195
Producers' Associated Oil Co., formation of.....	III 191
Production, "alliance" restricts.....	III 181
Productive capacity of, vast.....	III 199
Pure Oil Co., formation of.....	III 196
Policy of the.....	III 196
Railroads, and.....	III 53
Combination with.....	III 176
How used.....	III 175
Rate war of the N. Y. Central and Pennsylvania railroads.....	III 174
Rebate contract in operation.....	III 185
Refining methods, early.....	III 172
Reorganization, basis of 1892.....	III 195
Of 1899.....	III 197
Restricted product policy, growth of.....	III 191
Rise and supremacy of, company, (G. H. Montague).....	III 171
Rockefeller in 1865.....	III 172
Shipping, economy in.....	III 193
South Improvement Co. organized.....	III 176
Supreme in 1883.....	III 190
Spy system charged.....	III 201
Tariff, and the.....	III 353
Tidewater Co., the war on the.....	III 189
Surrender of.....	III 190
Titusville mass meeting.....	III 178
Transit company-Pennsylvania, agreement.....	III 189-90
Trust described, first.....	III 183
Dissolved in 1892.....	III 195
Formation of the, in 1881.....	III 187
The.....	II 349
Trustees, the original.....	III 188
Vandergrift and Foreman, activities of.....	III 181
Combine with.....	III 182
Various views of.....	III 171
Stanford, Leland.....	
Vineyard of.....	V 262
"Star spangled banner".....	
Authorship of.....	I 357
Starch.....	
(H. W. Wiley).....	V 166
Gluten.....	V 172
Glucose, residue.....	V 171
Manufacture from potatoes.....	V 173
Methods of.....	V 166
Separators, germ.....	V 168
Sources of.....	V 166

- State, the.....
 Burgess, John, on.....I 81
 Government, distinguished from.....I 81
 Honesty in.....I 238
 Municipal government and.....II 417
 Purpose of.....I 80
 Representation, in.....II 40
 The educated man and, (H. S. Pritchett).....I 234
 (See also government).....
 Steam (see engineering, power, motive).....
 Steamboats.....
 American, first.....IV 154
 Best days of.....IV 157
 Building yards, early.....IV 155
 Clermont, run of the.....IV 153
 Decline of river trade.....IV 161
 Earnings, early, of.....IV 156
 Fitch, John, inventor of.....IV 153
 History, early.....IV 153
 Lee-Natchez race.....IV 158
 Robert E.-Natchez race.....IV 156
 Mississippi and Ohio, first in.....IV 155
 Missouri, the, on.....IV 156
 New Orleans, the.....IV 155
 Roosevelt, Nicholas J., and.....IV 154
 Romance of the, (C. E. Fitzmorris).....IV 152
 West, in the early.....III 18
 (See also trade).....
 Steamships.....
 Oriental trade, for.....VII 205
 (See also shipbuilding).....
 Steamers, Joseph N., electrician.....VII 132
 Steel.....
 American primacy in iron and steel, (J. F. Crowell).....VI 112
 Armour plate making.....IX 326
 Bessemer converter, working a.....VI 173
 Process.....VII 28
 Converting by.....VI 174
 Carnegie output of.....VI 152
 Works, scope of.....VI 151
 Center of world of steel (W. Fawcett).....VI 166
 Chromite, uses of.....VI 178
 Cobalt, hardened by.....VI 178
 Edgar Thompson Co. founded.....IV 149
 Exports of American.....IV 62
 Handling ore at Pittsburg.....VI 166-7
 Hardening, metals for.....VI 177
 Hauling molten iron.....VI 171
 Horsepower of, mills.....VII 214
 Machinery in, mills.....VIII 12
 Machinery of the mills.....VI 172
 Methods, old furnace.....VI 167
 Molybdenum, hardened by.....VI 180
 Nickel for hardening.....VI 178
 Perils to life in mills.....VI 169
 Rails, American.....VII 30
 Steel—Continued.....
 Rolling of.....VI 175
 Steel hardening metals, (J. H. Pratt).....VI 177
 Trust, the.....II 333
 Trust, (C. S. Glead).....VI 157
 Tungsten, hardened by.....VI 180
 Steel corporation, United States.....
 Agreement of, first.....VI 159
 Capitalization of.....VI 162
 Carnegie interests and.....VI 144
 Companies of, integral.....VI 142
 Constituent companies.....VI 160
 State of.....VI 161
 Stocks of.....VI 162
 Experiments.....VI 137
 Factory methods of.....VI 166
 First mention of.....VI 159
 Frick controversy.....VI 145
 Gates, John W., and.....III 382
 Genesis of, (E. S. Meade).....VI 37
 Lakes, great, and the.....IV 146
 Iron and steel compared.....VI 158
 Markets of.....VI 164
 Menace to foreign industry.....VI 163
 Morgan's, J. P., opinion of.....VI 163
 Organization of, conditions of.....VI 137-8
 Preliminary companies.....VI 139
 Projectors of.....VI 159
 Steel, early, in U. S.....VI 59
 Uses of steel.....VI 159
 Stock of.....VI 140-1
 Subsidiary industries of.....VI 166
 Stearns, Worthy P.....
 Beginning of America's foreign trade.....IV 89
 Stevens, Emerson O.....
 National soldiers' home.....IX 411
 Stevens institute.....VII 303
 Stevenson, John J.....
 Debt of world to pure science.....VII 24
 Stewart, Ethelbert.....
 Labor unions influence on immigrants.....VIII 226
 Wrecked labor organizations.....VIII 221
 Stewart, Merch B.....
 Army as social factor.....IX 152
 Stickney, A. B.....
 Railroad problem.....IV 298
 Stille, Henry.....
 Researches of.....VII 429
 Stimson, F. J.....
 Labor laws.....VIII 194
 Stock, live (see live stock).....
 Stockbridge, George Herbert.....
 History of electricity in America.....VII 109
 Stockyards (see packing).....
 Stone.....
 Trust.....III 164
 Stones, precious.....
 (G. F. Kunz).....VI 324

Stones, precious—Continued.

- Government discoveries in America.....VII 43
(See also several kinds of).....
Storey, Judge.....
Opinion of, on Washington's veto of representation bill.....II 54
Storms (see weather).....
Story, Joseph.....
Supports navy.....IX 216
Stowe, Harriet Beecher.....I 361
Strikes.....
And the philosophy of the strikers, (F. K. Foster).....VIII 152
Accomplish nothing.....III 315
American.....VIII 16
Arbitration, compulsory, labor opposed to.....VIII 166
Of good.....III 321
Bascom.....VIII 162
Breakers, and.....VIII 160
Business principles, antagonistic to.....III 315
Calling of.....VIII 170
Causes of.....VIII 156
Clear makers, of.....VIII 157
Coal, of 1897.....VIII 348
Of 1900.....VIII 350
Of 1902.....VIII 126
Of 1902.....III 321
Of 1902, demoralization caused by.....III 323
Of 1902, losses in.....III 323
Of 1902, report on.....III 324
Compulsion not bargains.....III 314
Conservatism in.....VIII 159
Cost of, statistics of.....VIII 148
Court decisions on.....VIII 201
Rulings on.....VIII 163
Effects of, in figures.....VIII 151
Efficiency of.....VIII 152
Foundries in.....VIII 92
Jay Gould.....VIII 279
Lawlessness, tend to.....III 315
Limited to few men.....VIII 120
Management of, (H. W. Field).....VIII 168
Motives of.....VIII 157
Object of, primary.....VIII 158
Open shops and.....VIII 199
Pullman.....VIII 329
Purpose of.....VIII 165, 153
Preparing for.....VIII 169
Social effect of.....III 317
Statistics.....VIII 130
Lockout.....VIII 148
Success of.....VIII 165
Successful.....VIII 149
Suppressed, should be.....III 317
Trade unions, and.....VIII 156
Treason, encourage.....III 324
Twenty years of, and lockouts, (F. J. Sullivan).....VIII 148

Strikes—Continued.

- War, as.....III 316
(See also civic federation, industrial commission, labor, industry).....
Straus, O. S.....
Work of civic federation.....VIII 100
Strawberries.....
Williams, Roger, found in America by.....V 238
Struthers, J.....
Asphaltum and bituminous rock.....VI 395
Asphaltum and bitumen.....VI 395
Bauxite.....VI 266
Borax.....VI 414
Crude mineral products.....VI 318
Graphite.....VI 300
Mineral pigments.....VI 317
Phosphate rock.....VI 438
Quicksilver.....VI 282
Sulphur and pyrite.....VI 348
Stuart, James E.....
The army in the Spanish war.....IX 64
Sturgeon, William.....
Electrical scientist.....VII 114
Sulphur.....
Prepared, how.....VI 352
Properties of.....VI 348
Uses of.....VI 349
Supply of, world's.....VI 350
Sulphuric acid (see sulphur).....
Sulu, Sultan of.....IX 82
Sun, the.....
Motive power, as.....VII 229
Summer gardens.....
City life, as factors in.....II 113
Supreme court.....
Achievements of.....II 83
American invention.....II 88
System of.....II 76
Behring sea cases.....II 91
Constitution, and.....II 62
As interpreter of.....II 73
Constructed, as originally.....II 80
Corporations, decision on rights of.....II 71
Decisions, importance of their, reported.....II 85
Dred Scott case, opinion of Justice Campbell on.....II 87
English court, modeled on.....II 90
Environment, influence of, on.....II 87
Evils of checks to.....II 84
Factory legislation, on.....VIII 49
Federation, under the.....II 78
Foreigners grievances, should redress.....II 90
Redress in, for.....II 90
Gibbons vs. Ogden, decision in.....II 69

Supreme court—Continued.

Harlan, decision of, on railroad rates.....	II 73
Insular cases, decision of, in.....	II 88
International diplomacy, members of, in.....	II 91
Functions (Field).....	II 74
Jefferson's appointees.....	II 82
Justices of.....	II 82
Legislatures, and.....	II 82
Majority, proposal to fix.....	II 86
Missouri, trans. decision.....	IV 223
Militia, uses of, by.....	II 83
Mistakes of.....	II 86
Number of members of.....	II 82
Opinions of, value of, written.....	II 83
Packing of.....	II 83
President, interfered with, by action of, in Georgia slave cases.....	II 94
Prize cases.....	II 90
Safeguards of justice.....	II 84
Stability, its (Simson E. Baldwin).....	II 81
States, as arbiters between.....	II 90
Unanimity desirable.....	II 86
Union, on indivisibility of.....	II 75
Work of, early.....	II 81
Subsidies.....	
American, early.....	III 40
Foreign merchant marine.....	IV 126
Submarine boats, (see boats, submarine).....	
Subways (see railroads, underground)	
Sugar.....	
American and world's production, compared.....	III 2
Area and production.....	V 6
In Cuba.....	II 307
Molasses act of 1733, effect of.....	IV 83
Porto Rican.....	II 299
Tariff and.....	III 370-1
Trust, prosecution of.....	III 207
In France.....	II 354
The.....	II 346
West, in the earl.....	III 19y
Sugar (beet).....	
(Charles F. Saylor).....	V 227
American, belt.....	V 234
Arts and sciences, in the.....	V 234
Capital, present, in industry.....	V 233
Consumption, American and foreign.....	V 233
Increase in U. S.....	V 233
Cost of beet production.....	V 229
Costs and profits in.....	V 232
Crops, first American.....	V 21
Favorable localities.....	V 230
Food, as.....	V 232
History, early.....	V 227
Industry in U. S., (C. F. Saylor).....	V 227
Labor in beet fields.....	V 230
Plant, care of growing.....	V 229

Sugar, cane—Continued.

Preservative, as.....	V 234
Price of beets, average yield and.....	V 231
Statistics of beet and sugar production by states.....	V 230
Sugar, cane.....	
(F. G. Frevert).....	V 209
American, house, first.....	V 210
Best.....	V 217
Capital, early, in.....	V 214
In modern plant.....	V 214
Changes, post-bellum.....	V 221
Civil war, effect of.....	V 217
Colon's cane.....	V 216
Columbus, found by.....	V 210
Consumption, ante-bellum and present.....	V 216
Cost of handling.....	V 226
Production.....	V 223
Crops and weather.....	V 222
Cuban plantations.....	V 223
de Bore's invention.....	V 211
Diffusion process.....	V 218
Government experiments.....	V 218
History, early.....	V 209
Louisiana, introduced into.....	V 210
Methods, early.....	V 212
Plantations, character of.....	V 21
Sucrose content of cane.....	V 223
Manufacture, present methods of.....	V 219
Manufacturing, present methods of.....	V 214
Molasses.....	V 221
Morgan's vacuum pan.....	V 213
Planting.....	V 216
Production, early and later.....	V 214
Rillieux' evaporation method.....	V 213
Social plantation life.....	V 216
Soil and cultivation.....	V 222
Statistics, recent, of.....	V 224
Steam mill, first.....	V 212
Suicide.....	
Causes of, in cities.....	II 118
(See also suicide, race).....	
Suicide, race.....	
Causes of.....	X 213
Children, decline in number of.....	X 211
From 1850 to 1900.....	X 212
In U. S., (W. F. Wilcox).....	X 207
Negro and white.....	X 210
Reproduction by decades.....	X 209
Statistics.....	X 208
Women and children, statistics of.....	X 208
Sullivan, Frank J.....	
Twenty years of strikes and lockouts.....	VIII 148

GENERAL INDEX

401

Sulphur.....	
J. Struthers, on.....	VI 348
Consumption of sulphuric acid.....	VI 359
Extraction of.....	VI 354
History, early.....	VI 348
Manufacture of sulphuric acid.....	VI 358
Market forms of.....	VI 349
Mining of, in U. S.....	VI 351
Occurrence of, in U. S.....	VI 352
Surgery (see medicine and surgery)...	
Sutro, Adolph, mining engineer.....	VI 25
Sweat shops.....	
Industrial commission on.....	VIII 31
Open shops.....	VIII 212
Remnants of old regime.....	VIII 342
Swift, Eben.....	
Training of military officers.....	IX 141
Swine.....	
American, first.....	V 23
(See also hogs).....	
Switzerland.....	
Races in.....	I 12
Watch industries.....	VII 353
Swords.....	
Biddle's.....	IX 394
Capron's.....	IX 395
Decatur's.....	IX 397
Historic, (R. L. Geare).....	IX 392
Jameson's.....	IX 398
Of Dewey.....	IX 393
Of Grant.....	IX 398
Of Hancock.....	IX 400
Of Jesse Duncan Elliott.....	IX 394
Of Sherman.....	IX 400
Ord's, J. T.....	IX 395
Paul Jones' prizes.....	IX 394
Ripley's.....	IX 397
Syrup (see sugar).....	V 213

T

Tailors.....	
Conditions of.....	VIII 18
Talc.....	
J. H. Pratt, on.....	VI 424
Mining of.....	VI 427
Occurrence.....	VI 425-6
Uses of.....	VI 428
Varieties of.....	VI 427
Taney, Roger B.....	
Lincoln, compared with.....	II 70
"Dred Scott case".....	II 85
Tariff.....	
Bonds, cheap U. S.....	II 328
Buchanan's message of 1857.....	II 328
Constitution, in the.....	VII 271 II 315
Cotton, and trusts.....	III 268
Cuban, reduced.....	II 308
Dingley bill and its effects.....	II 336
Effect of, from 1865 to 1883.....	II 331
First act, effect of.....	II 316

Tariff—Continued.

Foreign policy and.....	II 124
Free trade act of 1846.....	II 324
George B. Curtiss, on.....	II 318
Henry Clay, on.....	II 320
History, early, of.....	II 312
Increase of, in 1842.....	II 323
Iron, not vital.....	VI 100
Its mission done.....	IV 267
Jackson on.....	II 319
Kasson treaties.....	II 384
Laborers, and.....	II 341
Legislation, hostile, of 1815-18.....	IV 92
Locomotives, foreign, on.....	IV 388
McKinley bill of 1890.....	II 333
On early.....	II 320
Manufacture, lowers quality of.....	III 289
Opposition to, of 1816.....	IV 97
Panic of 1855.....	II 327
Paper trust, and.....	III 368
Party issue, as a.....	II 329
Pioneers of.....	IV 96
Population and.....	II 316
Prices and.....	VIII 269
Protection in U. S.....	II 312
Reciprocity commission.....	II 383
Reduction of 1833.....	II 321
Of 1857.....	II 327
Removed, when, should be.....	II 377
Retaliation, beginning of Ameri- can.....	IV 98
Retaliation in iron, danger of.....	VI 117
Republican, first.....	II 330
Policy, as.....	II 392
Republicans in 1892, defeat of.....	II 334
Revenue bill.....	II 333
South opposed to early.....	II 321
Standard of, living, and.....	VIII 263
Steel trust and.....	III 368
Tariff of 1790.....	II 340
Tin plate, and.....	II 344
Tobacco, and.....	V 282
Trust and.....	III 371
Trade, early increase of, under.....	II 317
Trust, argument on.....	III 373
Manufactures, on.....	III 362
Trusts, the, and (S. E. Payne).....	II 338
And.....	III 116
And the, (C. Beardsley).....	III 361
And early.....	II 347
Free trade no remedy for.....	II 357
In Europe, and.....	II 353
In Great Britain and.....	II 351
No relation to.....	II 352
Non-protected.....	III 366
Protected by.....	III 363
United nations and.....	II 30
Wages, and.....	VIII 199
Walker's, Robert J., bill.....	II 326
Watch industry and.....	II 343

Tarbell, Ida M. II 10
 Declaration of independence II 10
 Tassin, Augustus G. IX 401
 Sword of IX 401
 Taussig, F. W. VI 105
 American iron industry VI 105
 Taxation I 86
 Education and I 86
 Taylor, F. W. VIII 294
 Premium wage system of VIII 294
 Taylor, H. C., naval officer IX 369
 Taylor, William A. V 236
 Substitution of domestic for
 foreign fruits V 236
 Taylor, Zachary, soldier IX 46
 Tea V 292
 American, (J. Wilson) V 292
 American, gardens, (G. R.
 Clarke) V 292
 Power, problems of V 296
 Climate and soil V 294
 Competition for U. S. grower V 295
 Cost of manufacture V 297
 Culture in U. S., (Grace Clarke) V 292
 Early American V 292
 Government garden in South
 Carolina V 293
 Growth and profits of, culture in
 U. S. V 293
 Production of high priced V 295
 Profit in American black V 295
 Shepard, Charles, as grower V 293
 Teachers (see trades unions)
 Technical education (see education).
 Technology (see education, technical)
 Tehuantepec ship canal
 American reservation II 238
 Ship railway II 234
 Treaty of 1857 II 236
 Telegraphs
 American Union company,
 organization of IV 482
 Automatic IV 484
 Business of American, annual IV 479
 Companies unprogressive IV 483
 Congress, action of, on early IV 482
 First bill passed by IV 466
 Opposition of, to IV 463
 Congressional help IV 478
 Conversations by, first IV 474
 Early days of the first telegraph
 line (Stephen Vail) IV 460
 Edison's inventions VII 132
 Experiments of 1844 IV 469
 Fire alarm IV 484
 First instrument used IV 467
 Gale and Vail associates of
 Morse IV 462
 Gould and Russell Sage IV 482
 Henry's first invention VII 115

Telegraphs—Continued.

House committee, first report of,
 on IV 463
 Invention, backwardness of IV 483
 Line, opening of first IV 480
 Lines, early IV 481
 Message, first private IV 465
 First public IV 467
 Messenger call IV 483
 Morse and Vail, merits of VII 123
 Partnership of IV 464
 Poverty of VII 122
 Morse, early poverty of IV 480
 Invention of VII 117 IV 460
 On construction of lines IV 476
 Morse's claims VII 121
 Letter to Woodbury IV 462
 Proposal to congress IV 465
 Report to secretary of treasury IV 475
 Operating forces in 1845 IV 480
 Overland line, building of IV 482
 Philadelphia-New York line IV 476
 Porto Rican II 238
 Postal company IV 482
 Profits in 1846 IV 480
 Progress of 1844 IV 470
 Railroad lines, and IV 481
 Rates and rules of first line IV 478
 Receipts, early IV 478
 Recent progress of, (M. W.
 Courtwright) IV 480
 Report, first, of national con-
 vention by IV 476
 Stearns, Nicholson, and Phelps,
 inventions of VII 132
 Teels on wireless VII 163
 Vail as inventor of VII 119
 Complaints of Morse IV 473
 Cryptogram IV 467
 Devices VII 120
 Early experiments IV 464
 Improvements IV 468
 Later inventions IV 468
 Letters in 1843 IV 466-7
 Of 1846 IV 477
 New alphabet IV 468
 Western Union and American
 Union, consolidation of IV 482
 Western Union, organization of IV 481
 Wheatstone system, operation of IV 483
 Wires, improvements in IV 485
 (See cables)
 Telegraphs (submarine)
 (Frederic Royce) IV 487
 American Pacific cable IV 497
 American-West Indian lines,
 new, laid IV 496
 Atlantic cables VII 129
 Atlantic company, first IV 489
 Cable, surveys for first IV 489

Telegraphs (submarine)—Continued.

- Australian-Vancouver cable laid.....IV 496
- Beginnings of.....IV 487
- British commission appointed.....IV 491
- Cable of 1858, laying the.....IV 490
- Civil war, work blocked by.....IV 490
- Chinese-Australian cable laid.....IV 495
- Cost of new Atlantic cable.....IV 492
- Submarine messages.....IV 461
- European, early.....IV 488
- Field's early work.....IV 489
- Field, Cyrus W., idea of.....IV 488
- Money secured by.....IV 492
- French-American cable laid.....IV 495
- Second, cable laid.....IV 495
- Gould cables laid.....IV 495
- Great Eastern fails.....IV 493
- Final success.....IV 493
- Purchased.....IV 493
- New trial.....IV 493
- Success.....IV 494
- Improvement in submarine in ten years.....IV 461
- In methods and material.....IV 498
- India cables, failure of the.....IV 490
- Second.....IV 491
- Irish-American cable laid.....IV 495
- London-Cape Town cable laid.....IV 495
- Mackey-Bennett cable laid.....IV 496
- Mediterranean cable, first.....IV 491
- New York-West Indies-Brazil cable laid.....IV 495
- Nova Scotian, proposed.....IV 488
- Routes of submarine.....IV 460
- Speed of transmission, early.....IV 491
- Statistics of.....IV 498

Telegraphy (see telegraphs).....

- Telephone, the.....
- Beginnings of, (Alexander Graham Bell).....VII 171
- Bell's early experiments.....VII 177
- First idea.....VII 171
- Currents, telephonic.....VII 173
- Helmholtz's idea.....VII 176
- Invention of.....VII 9-10 137
- Inventors of.....VII 175
- Perfecting.....VII 181
- Phonograph.....VII 372
- Rival claims.....VII 137
- Success, first.....VII 180

Temperance.....

- Labor, a requirement of American.....III 252
- (See also drunkenness).....

Tenements.....

- Closest accommodation.....X 199
- Cost of.....X 201
- Definition of.....X 196
- Fire protection for.....X 198
- History.....X 197

Tenements—Continued.

- House regulation (Robert W. De Forest).....X 193
- Law for regulation of.....X 194
- Laws in U. S.....X 196
- Limitation.....X 202
- Need of.....X 200
- Model.....X 194
- Occupants in N. Y., number of.....X 198
- Property rights and.....X 194
- Rent from.....X 202
- Sanitation and.....X 195
- Size of.....X 202
- Water supply of.....X 199
- Tennant, John V. B., physician.....VII 407
- Tennessee cruiser.....IX 303
- Iron clad, structure of.....IX 330
- Territories N. W.....
- Colonization, barred from, by Monroe.....II 167
- Terror, (monitor).....IX 293
- Tesla, Nikola.....
- Earth currents, discovers.....VII 165
- Plans of, for wireless plants.....VII 168
- Transmission of electric energy without wires.....VII 163
- Wireless electricity.....VII 168
- Texas.....
- Annexation of.....II 279, IX 44
- Holst, Von, on.....II 218
- Treaty of 1844.....II 218
- Cattle breeding, dominance of, in.....V 182
- Development and statistics of.....II 279
- History, early.....II 277
- Mexican war.....II 281
- Republic declared.....II 278
- Size of.....II 279
- U. S. S.....IX 293-4-5
- (See also war, Mexican).....
- Textile fabrics.....
- Difficulties, early, in America.....VII 270
- Horsepower in, mills.....VII 214
- Production, American and world's compared.....III 2
- Trusts controlling, statistics of.....III 164
- (See also special fabric names).....
- Thayer school.....VII 302
- Theaters.....
- American, (Otis Skinner).....I 307
- Original.....I 308
- Booth, Edwin.....I 312, 314
- Cushman, Charlotte.....I 309
- Daly's work.....I 312
- Drews, the.....I 315
- Foreign methods, study of.....I 307
- Players in U. S.....I 307-8
- Forrest, Edwin.....I 311
- James A. Herne.....I 311
- Joseph Jefferson.....I 314
- Players, early American.....I 309, 316

- Theaters—Continued.
 Union Square.....I 310
 Rise of the American stage.....I 317
 Thorne, C. R.....I 310
- Thimmonier, Barthélemy.....
 Inventor of sewing machine.....VII 341
- Thomas, A. L.....
 American advertising.....I 357
- Thomas, Leroy.....
 Commercial floriculture.....V 363
- Thomson, Elihu, electrician.....VII 133
- Thomsonite.....VI 334
- Thoreau, Henry D.....I 359
- Thunder (see weather).....
- Thurston, Robert H.....
 Business principles in the con-
 duct of industries.....III 211
- Tohacco.....
 (John H. Garber).....V 277
 Acreage, percentage to general.....V 280
 Value.....V 280
 Cigar production and consump-
 tion in U. S.....V 282
 Cigarette statistics.....V 283-4
 Commercial importance of,
 early.....IV 71
 Crops, first American.....V 21
 Cuban.....II 307
 Cultivated first by Europeans.....V 278
 England, growth forbidden in.....IV 72
 Enumeration, effect of, on.....IV 73
 Exports.....V 32
 First.....V 279
 Georgia, early cultivation in.....V 19
 History, early.....V 277-8
 Integration of, industry.....V 286
 Manufacture, extent of, and
 methods.....V 281
 Of chewing, and smoking,
 and snuff.....V 284
 Machinery.....V 283
 Porto Rican.....II 299
 Production, American, 1900.....V 280
 Area and.....V 6
 By states.....V 280
 Cost of.....V 285
 Early.....V 279
 New England.....V 280
 Increase of.....V 31
 Seed.....V 319
 Snuff.....V 285
 Tariff, and.....V 282
 Trust, the.....III 72
 Trusts and.....III 72
- Tolman, W. H.....
 The social engineer.....VIII 319
- Tonnage.....
 Isthmian canal, increase of,
 and.....IV 195
 Isthmian canal, possible, of.....IV 193
- Tonnage—Continued.
 Suez canal's.....IV 196
 (See also commerce, trade, great
 lakes, shipbuilding).....
- Tools.....VIII 360
 Foreign estimate of American.....IV 56
 (See also machinery).....
- Topaz.....VI 329, 330
 (See also corundum).....
- Tornadoes (see weather, relief).....
- Torpedo boats.....
 (J. D. J. Kelley).....IX 317
 Destroyers.....IX 315
 Firing torpedoes.....IX 321
 Improving.....IX 323
 Statistics.....IX 319
 Types of.....IX 315
 Whitehead to.....IX 321
- Tourmaline.....
 Mining of.....VI 332
- Townsend, George Alfred.....
 Early American financiers.....III 401
- Trachoma.....
 Immigrants afflicted with.....X 121
 Table of.....X 121
- Traction (see railroads and subheads)
- Trade.....
 Agriculture, American, and.....IV 103
 American, and commerce, (Victor
 H. Metcalf).....IV 1
 Difficulties in.....IV 12
 Of early.....IV 89
 Ancient times, in.....IV 266
 And railroads.....IV 266
 Asia and Oceania.....IV 5-6
 As American fly wheel.....IV 114
 Atlantic.....IV 21
 Australia, British and American
 with.....IV 9
 Beginning of American manu-
 factures and.....IV 99
 Of foreign (Worthy P. Stearns).....IV 89
 British and South America.....IV 7
 Dependence on America.....IV 114
 With South America.....IV 8
 Canal and river traffic, statistics
 of American.....IV 239
 Capital, first large use of for-
 eign.....IV 105
 China and Japan, British and
 American with.....IV 8-9
 China, American dependence on
 in cotton.....IV 115
 Opened by Philippine conquest.....II 200
 Chinese, importance of.....IV 203
 Consular service, value of.....IV 117
 Cotton, American foreign, in.....IV 13
 In Cuba and Philippines.....IV 13-14
 Cuba as gate to Latin.....IV 63
 Debits, our foreign.....IV 48
 Diplomacy, American, in Orient.....II 170

Trade—Continued.

Eastern states, and.....	IV	97
Elevators, modern grain.....	IV	163
Europe as a buyer in America.....	IV	42
European, deficiencies of.....	IV	22
Export of manufactures for		
1904.....	IV	112
Permanency of U. S.....	IV	110
Slow growth of American.....	IV	10
Exports and imports 1820-30.....	IV	105
Extension of our domestic and		
foreign, (G. B. Cortelyou).....	IV	514
Farmers, in U. S., difficulties of		
early.....	IV	24-5
Food shipper, U. S. as.....	IV	93
For 1820-30, balance of.....	IV	107
Foreigner uses, what the.....	IV	204
France with South America.....	IV	8
Fur, early American.....	IV	70
Harbors, American.....	IV	21
How best promoted.....	IV	117
History, early, U. S.....	IV	89
Imports in 1820, decrease of.....	IV	91
In 1904.....	IV	13
Increase of.....	III	478
From 1821.....	IV	104
Increasing complexity of.....	IV	115
Intricacies of American.....	IV	104
Isthmian canal and.....	IV	182
Lakes, annual, of great.....	IV	148
Of the great.....	IV	30
Locomotives, foreign, in.....	IV	385
Machinery, American, in Eu-		
rope.....	IV	113
Maintenance of.....	IV	113
Manufacturing plants, distribu-		
tion of, in 1820.....	IV	100
Markets, accessibility of.....	IV	111
Merchant marine, earnings of,		
in 1820.....	IV	105
Navy, need of.....	IV	16
Metals, foreign, in precious, for		
1820-30.....	IV	107
National policy, need of.....	II	113
Of 1820-30, analysis of.....	IV	106
Of U. S.....	IV	110
Orient, America's, in.....	II	140
Oriental, railroad steamers for.....	VII	205
Pacific lands, American, with.....	IV	15
Plants, American, in Europe.....	IV	118
Porto Rican.....	II	299
Prices of food products, early.....	IV	94
Progress, forces of.....	IV	449
Railroad rates and exports.....	IV	225
Railroads and growth of Ameri-		
can.....	IV	199
Reciprocity, navigation, of 1818.....	IV	93
Retaliation, beginning of Ameri-		
can.....	IV	98
Rivers, of American.....	IV	152
Importance of American.....	IV	30

Trade—Continued.

Shipbuilding and foreign, early		
American.....	IV	101
South America, American with.....	IV	6
German with.....	IV	8
Specie, exports and imports of,		
1820-30.....	IV	106
Statistics of, in 1821.....	IV	102
Steamboating, early.....	IV	153
Subsidized ships, foreign.....	IV	126
Suez canal India and.....	IV	29
Canal, tonnage of.....	IV	196
Tariff legislation, hostile, of		
1815-18.....	IV	92
Pioneers of, and.....	IV	96
Tonnage, American, 1861-1901.....	IV	131
Topography, American, and.....	IV	25
Trusts, and foreign.....	IV	111
Transportation, early American.....	IV	90
And pioneering.....	IV	96
Wheat exports, American.....	IV	40
World, uniting the.....	IV	117
(See also elevators, industry)...		
Trade, boards of.....		
Farmers, influence on.....	V	27
Trades Unions.....		
Alien labor in packing.....	VIII	227
American federation of labor,		
(S. Gompers).....	VIII	143
Americanizing force of.....	VIII	231
An influence for industrial peace,		
(J. Duncan).....	VIII	178
Arbitration, compulsory, and.....	VIII	121
Opposed to.....	VIII	166
Building trades.....	VIII	211
Character of unorganized labor.....	VIII	106
Chinese and.....	VIII	240
Civilization, products of.....	VIII	155
Closed shops.....	VIII	206-7
Combination, a law.....	VIII	113
Conspiracy and.....	VIII	218
Decisions.....	VIII	200-1
Contracts, closed shop.....	VIII	218
Label.....	VIII	192
Nature of.....	VIII	215
Sanctity of.....	VIII	178
Definition of open shop.....	VIII	201
Differentiation of.....	VIII	223
Effect of, agreements.....	VIII	205
Evolution, and.....	VIII	223
Federation of labor, American,		
permanence of.....	VIII	222
Future of.....	VIII	174
Good in.....	VIII	133
Government employees.....	VIII	208
History, early American.....	VIII	144
Early, in U. S.....	VIII	199
Of, in U. S.....	VIII	175
How labor, benefits the working-		
man, (F. F. Ingram).....	VIII	172

Trades Unions—Continued.

Imported labor and.....	VIII 199
Importing foreigners.....	VIII 237
Incompleteness of.....	VIII 220
Indestructible.....	VIII 222
Inevitable and just.....	VIII 307
Label. (J. G. Brooks).....	VIII 181
Adopted.....	VIII 182
Earliest.....	VIII 181
(F. J. Stimson).....	VIII 194
Garment.....	VIII 183
Hatters'.....	VIII 183 186
Influence of.....	VIII 184
Law, Illinois.....	VIII 195
Purpose of the.....	VIII 181
Strengthening the.....	VIII 187
Uses of.....	VIII 191
Law and closed shop contract, (Walter Drew).....	VIII 215
Locomotive engineers organized.....	VIII 144
Machinery and.....	VIII 368
Methods, right.....	VIII 97
Mine workers'.....	VIII 352
Perfecting.....	VIII 349
United.....	VIII 349
Miners, organization of.....	VIII 348
Monopolies, and.....	VIII 131
Monopoly, a.....	VIII 133
Open shop agreements.....	VIII 203
Policy.....	VIII 199
Open shop policy. (John R. Commons).....	VIII 199
Organization, thorough.....	VIII 207
Personal factors.....	VIII 211
Political nature of.....	VIII 208
Power of.....	VIII 178
Problems of.....	VIII 139
Race competition and.....	VIII 255
Brotherhood of.....	VIII 258
Railroads and.....	VIII 209
Recognized, not.....	VIII 97
Rights of.....	VIII 216
Shoemakers', survival of.....	VIII 222
Social influence of.....	VIII 173
Socialism, opposed to.....	VIII 129
Unorganized labor and.....	VIII 135
Solidarity of, cure for.....	VIII 429
Strike breakers.....	VIII 160
Strikes and.....	VIII 156
Sweat shops.....	VIII 212
Tainted money and.....	VIII 132
Tariff, and.....	VIII 199
Teachers'.....	VIII 385
Trusts, caused by.....	VIII 112
Typesetters', women in.....	VIII 384
Un-American.....	VIII 257
Unprotected.....	VIII 200
Woman's place in.....	VIII 375
Women in.....	VIII 383
Garment workers'.....	VIII 385

Trades Unions—Continued.

Wrecked, (E. Stewart).....	VIII 221
(See also civic federation, industrial commission.....)	
Training, manual.....	
Reformatories and.....	X 265
Transportation.....	
Agriculture, influence on.....	V 25
American, (G. H. Daniels).....	IV 199
And European compared.....	III 5
Early.....	IV 90
Pioneering and.....	IV 96
Canals and railroads in west, early.....	III 27
Companies, early American.....	III 35
Consolidation of, integration and.....	III 71
Corporations, stock of early.....	III 38
Food prices, early American and.....	IV 94
Policies, early American.....	III 9
Railroad regulation, (R. M. La Follette).....	IV 294
Roads and canals, Gallatin's report on.....	III 9
Travel.....	III 430
(See also automobiles).....	
(See also railroads, trade, com- merce, great lakes, canals).....	
Travis, Ira D.....	
Isthmian canal.....	II 228
Treadwell, Daniel, inventor.....	I 379
Treaties.....	
Agreements of U. S., other than treaties, (Charles C. Hyde).....	II 216
Canal treaty of 1846 with New Granada.....	II 233
Clayton-Bulwer.....	II 235
Of 1850.....	II 168
Extradition.....	II 172
Frelinghuysen-Zavala.....	II 245
Gadsden, effect of, on Isthmian canal.....	II 237
Guadalupe Hidalgo, ceding New Mexico and California.....	II 283
Hague, American commission to.....	II 209
Ratification of.....	II 206
Hay-Pauncefote.....	II 168, 246
Kasson reciprocity.....	II 384
Criticized.....	II 358
Soundness of.....	II 389
Modus vivendi.....	II 223
Oregon ceded.....	II 284
Postmaster general, power of.....	II 211
President, powers of.....	II 208
Reciprocity, various.....	II 378
River navigation, free, in con- gress of Vienna.....	II 168
Rivers, with South American states for free navigation of.....	II 168

Treaties—Continued.

- Senate a check on.....II 208
 Spanish claims commission.....II 222

Treves, Baron, surgeon.....VII 435

Trichina

- In man.....VII 419-20

Trinidad

- Asphaltum, deposits of.....VI 399

Trinity college, Hartford

- Architecture of.....I 274

Tripler (see liquid air)

Tripoli.....VI 436

Tropics

- American production in.....IV 44

(See races)

Trowbridge, William F.

- Shoe manufacturer.....VII 323

Trusts

- (J. W. Folk).....X 308

(Peter S. Grosscup).....III 77

(Arthur T. Hadley).....III 111

Halle, von, on.....III 124

John A. Hobson, on.....III 49

Willoughby, W. F., on.....III 63

Trust companies

- Admiralty for, American.....III 59

Alarm over, American.....III 60

And prices, (E. A. Hourwich).....III 145

Progress, (W. R. Lawson).....III 377

Anti-trust law, inefficiency of.....III 208

Limitation of.....III 207

Arguments, general, against.....III 160

For.....III 159

Banking, concentration of, to

U. S., (C. J. Bullock).....III 411

Banks and.....III 434, 448

Bargains, do not dictate.....III 128

Burglary and.....III 435

Buy cheaply.....III 145

Capital in.....III 440

Invested.....III 103

Statistics of.....III 166

Capitalization of.....III 97

Carnegie company's power.....III 69

Causes of growth of.....III 52

Causes of.....III 105

Cement and clay.....III 164

Census, plan of taking, of.....III 161

Cheap labor and.....III 100

Chemical, statistics of.....III 164

China and.....III 101

Civilization, combination a trait

of.....III 92

Clay, glass, and stone, statistics.....III 164

Coal strike of 1902, popular

feeling and.....III 61

And railroads.....IV 334

Combination a law.....VIII 113

And competition.....III 122

Meaning of.....III 122

Trust companies—Continued.

Competition

Among American.....II 357

An impossible remedy.....III 141

Crushing, remedy for.....III 135

Disappearance of.....VIII 128

Evils of, exaggerated.....III 137

Not caused by.....III 127-8

Potential.....III 139

Troubled by.....III 125

Whisky, not due to.....III 127

With, a waste.....III 140

Untried.....III 138

Congress

And anti-trust law.....III 211

Constitutional power of.....III 207

How, may control, (J. W.

Jenks).....III 222

Resources of, for control of.....III 218

Right of, to control, (P. C.

Knox).....III 204

Constitution, inadequacy of the,

to deal with.....III 61

Consolidation, benefits of

Causes of.....III 102

Controlled by a few men.....III 55

Cost of living, and.....III 85

Cotton freights, equalizing.....III 215

Contracts, legality of.....III 219

Created by tariff.....III 370

Danger lurking in.....III 87

Dangerous to state.....III 169

Nepotism, dangers of.....III 131

Prophecy, (Senator C. K.

Davis).....III 169

Definition of.....III 122, 204

Democratic, system of.....III 55

Department stores.....III 72

Development, stages of.....III 436

Developers of ability.....III 131

Diffuse wealth, centralize power.....III 57

Discrimination, desirable.....III 225

Division of labor in.....III 130

Dynamite, European.....III 356

Early history of.....III 42

Economics of.....III 126

In advertising and soliciting.....III 129

Economists, American, and.....III 58

Economy of, and invention.....III 204

Ely's view.....III 58

Employees, statistics of.....III 167

Engineers, helped by.....III 258

Enterprise, dampeners of.....III 133

Evils, conspicuous, of.....III 205

Factor system.....III 116

Factory system, growth of

American.....III 80

Favorite states for organization

of.....III 168

Federal incorporation of.....III 227

Law, a good.....III 229

Trust companies — Federal incorporation of, Continued.

Objections to.....	III	228
Financial change caused by.....	III	81
Financier, the, and.....	III	55
Fixed charges unaffected.....	III	130-1
Flour monopoly.....	IV	336
Food products, statistics of.....	III	163
Foreign eyes, good in.....	VIII	12
Trade, and.....	IV	111
France, prohibited in.....	II	354
Free trade no remedy.....	II	357
Future, effects of.....	III	74
Of, cloudy.....	III	124
Questioned.....	III	104
Germany in.....	II	355
Good and bad of, (C. J. Bullock).....	III	121
Good in.....	III	83
Government control of.....	IV	341
Interference, successful.....	III	217
Ownership, impossible under.....	IV	364
Grain monopoly, the.....	IV	334-5
Great Britain, in.....	II	352
Grosscup's definition of.....	III	79
Remedy for.....	III	89
Growth of.....	III	434
History of, in U. S., early.....	II	346
Illinois, largest.....	III	438
In America, number of.....	III	162
Incapable hands, in.....	III	98
Incorporation of, first.....	III	434
Increase of.....	III	439
Independent concerns, rise of.....	III	143
Individual advancement, would curtail.....	III	132
Industry.....	III	431
Industrial commission, and.....	III	105
Report of.....	III	106
Competition, destructive.....	III	108
Discriminations, unjust.....	III	108
Forms taken by.....	III	112
Growth, rapidity of.....	III	106
Public control.....	III	118
Tariff and.....	III	118
In light of census, (W. B. Merriam).....	III	159
In U. S.....	III	438
Investigating the, problem, (M. H. Robinson).....	III	102
Paid by steel.....	III	163
Wages, influence on.....	III	118
Interstate commerce, and.....	III	206
Investigation of, (M. H. Robinson).....	III	102
Knox, on.....	III	222
Law, and common.....	III	218
How trusts dodge inter-state.....	III	225
Laws, need of.....	III	217
Leather, statistics of.....	III	164
Licensed, should be.....	III	223
Lumber, statistics of.....	III	164

Trust companies—Continued.

Machinery, aided by.....	III	51
Manufacturing, legal.....	III	208
Meat monopoly.....	IV	338
Trust prosecution.....	III	215
Menace to America.....	III	50
Metal, statistics of.....	III	164
Miscellaneous, classed as.....	III	164
Monopoly.....		
And classes, (J. B. Clark).....	VIII	127
Cannot establish.....	III	134
Intolerable.....	VIII	129
Losses of.....	III	133
No advantage.....	III	130
Not the object.....	III	123
Power.....	III	114
Predicted.....	III	125
Private in U. S.....	III	83
Safe.....	III	139-40
Morgan, J. P., entrance of, in steel.....	III	67
Nation helpless.....	III	210
Natural growth.....	III	111
Nature of.....	III	51
Necessaries of life and.....	III	206
Non-protected.....	III	366
Northern securities prosecution.....	III	218
Number of, in U. S.....	III	437
Oil.....	III	142
Price of, in eighteen cities.....	III	155
Oils.....	III	72
Overcapitalization, evil of.....	III	208
Owners must be moral.....	III	144
Of, benefactors.....	III	96
Ownership.....		
Curtail popular.....	III	88
New system of.....	III	78
Public, only remedy.....	III	142
Paper, statistics of.....	III	164
Plants controlled, number of.....	III	162
Popularly owned, will be.....	III	79
Prevalence of, ultimate.....	III	135
Progress and.....	III	429
Policy, public, against.....	III	88
Price table, Monnett's.....	III	157
Prices, high natural.....	III	137
Discrimination in.....	III	224
Fluctuations in oil.....	III	150
Increase.....	III	114
Market unaffected by arbitrary.....	III	151
Mystery in oil.....	III	156
Of crude oil.....	III	145
Of four staples and.....	III	154
Oil, below cost.....	III	149
Oil, for twenty years.....	III	147
Oil, local discrimination in.....	III	153
Oil, per barrel.....	III	148
Raised by.....	III	152
Speculation and oil.....	III	151
Pride for America.....	III	205
Product of, value.....	III	168
Production, cause cheaper.....	III	127

Trust companies—Continued.

Production	
Economy of.....	III 81
Total of.....	III 104
Products of present times.....	III 80
Profits, oil, reduced.....	III 147
Property, statistics of.....	III 168
Protection on trust goods.....	III 362
Public supervision.....	III 226
Publicity desirable.....	III 224
Needed.....	III 207
Railroad capitalization.....	IV 329
Concentration.....	III 55
Regulation, (R. M. La Follette).....	IV 294
Railroads, bred by.....	III 53
Capital in.....	III 103
Caused by.....	III 109
Rebate injunction of 1904.....	III 212
Recently organized.....	III 162
Revolution, an industrial, because of.....	III 82
Rights of capital, superintendence and labor.....	III 93
Rise and business of the Modern Trust Company (W. P. Gest).....	III 426
Roosevelt, on.....	II 453
A check on.....	III 382
First message on.....	III 204
Rosebery, Lord, on American.....	IV 55
Sherman act.....	II 350, III 82
Failure of.....	III 83
Law, efficiency of.....	II 358
Organized since.....	III 83
Socialism, at one with.....	III 136
Only cure.....	VIII 129
Socialist arguments accepted.....	III 135
Speculative evils of.....	III 161
Standard oil.....	II 352
Policy.....	III 150
State action ineffectual.....	III 222
States, question for the.....	II 358
The several, and.....	III 62, 210
Steel consolidation, history of.....	III 65
Output, value of.....	III 163
Steel.....	II 353
Steel, (C. S. Glead).....	VI 157
Expansion of.....	III 69
Future of.....	III 71
Statistics of iron and.....	III 162-3
Total salary of.....	III 163
Trust, last phase of.....	III 68
Stock jobbing, a result of.....	III 132
Stock, value of fifty trusts.....	III 167
Stocks and bonds, statistics of.....	III 165
Of, owned by the many.....	III 99
Sugar.....	II 346
And tariff.....	III 371
Decision, Supreme court.....	III 208
Prosecution of.....	III 207
Tainted money and.....	VIII 132

Trust companies—Continued.

Tariff, the (S. E. Payne).....	II 338
As aid to, (C. Bearisley).....	III 361
Investments ruled by.....	III 137
No relation to.....	II 351
Protected.....	III 363
Removal of, as remedy for.....	III 372
Tax as a remedy.....	III 226
Tendency to, not universal.....	III 50
Textile trusts, statistics of.....	III 164
Theories, various.....	III 123
Trade restraint good.....	III 220
Unions and.....	VIII 131
Trades unions, caused by.....	VIII 121
U. S. not original in.....	III 353
Vehicle, statistics of.....	III 164
Wages, and.....	III 85
Wages paid, statistics of.....	III 168
Wealth, center, in few hands.....	III 78
(See also banks, steel corporation, United States).....	
Tuberculosis.....	
Combatting.....	X 161
Immigration and.....	X 123
Jews, among.....	X 68
Tucker, W. J.....	
Consanguinity of labor and education.....	VIII 426
Tungsten.....	
Steel, for hardening.....	VI 189
Tunnels (see railroads, underground)	
Turbine engines.....	
(C. C. Fitzmorris).....	VII 254
Advantages of.....	VII 257
Compressed air, and.....	VII 259
Deficiencies of.....	VII 256
Experimental stage.....	VII 255
History, early.....	VII 254
Invention of.....	VII 256
Niagara.....	VII 257
Solar motive power, and.....	VII 259
Structure of.....	VII 255
Tidal and wave.....	VII 258
Westinghouse, on.....	VII 254
Turkey.....	
American duty in Armenian massacres.....	II 139
Turquoise.....	VI 336
Mining of, in U. S.....	VI 337
Tutt, J. C.....	
Eminence of American army.....	IX 160
Twain, Mark.....	
(See Clemens, Samuel C.).....	
Tweed, William.....	II 110
Twitchell, Ames, surgeon.....	VII 431
Typesetters.....	
Machinery and.....	VIII 369
Women in, unions.....	VIII 384
Typewriters.....	
Beach's patents.....	VII 366
Development of, (H. E. Barbour).....	VII 365

Typewriters—Continued.

- Francis' patents.....VII 365
 History, early.....VII 365
 Inventors of, American.....VII 365
 Uses of.....VII 368
 Work of.....VII 370
 Typewriting machines.....
 American, in Europe.....IV 67
 Tides.....
 Motive power, as.....VII 258
 Tilton, James, physician.....VII 407
 Tin plate.....
 American wealth, and.....VII 274
 Tariff and.....II 248
 (See also iron).....
 Titanium.....VI 180

U

- Unemployed, the, (see relief, poor)..
 Union, American.....
 Wilson, Justice, opinion of, on.....II 64
 Union, the.....
 Supreme court on.....II 75
 Union Pacific railroad.....
 Military line.....III 371
 Unions, labor (see trades unions)..
 United nations.....
 Authorities of.....II 32
 Bill of rights.....II 31
 Modeled after U. S.....II 26
 United States.....
 Agreements of, other than
 treaties, (C. C. Hyde).....II 216
 Agriculture.....IV 31
 Alliances, foreign, possible.....II 141
 Asiatic empire, an.....II 136
 As a world power, (Simeon E.
 Baldwin).....II 196
 Birth as a nation.....II 158
 Borrower, not a.....III 392
 Climate of, causes of.....IV 25
 Constitution, as planned by.....II 78
 Held indivisible by.....II 75
 Cuba and.....II 127
 Expansion, territorial, of, (O. P.
 Austin).....II 265
 Foreign relations, growth of.....II 198
 French proposed alliance in
 1793.....II 159
 Great Britain's foreign policy,
 and.....II 137
 Hague, commission to.....II 209
 Isolation of, before Spanish war.....II 124
 Mountains of.....IV 26
 Obstacles of, to world union.....II 39
 Organization of, under consti-
 tution.....II 61
 Peace, drawbacks to, in govern-
 ment of.....II 201

United States—Continued.

- Philippine islands, duty of, to.....II 128
 Powers, growth of president's.....II 221
 Primacy of, on American con-
 tinents.....II 138
 Producer, leads world as a.....IV 35-6
 Races, blending of, in.....I 1
 Rainfall of.....IV 26
 Representation, and constitu-
 tion of.....II 49
 First to accept full.....II 36
 Representatives, shaken by ap-
 portionment of.....II 41
 Resources, natural, of.....IV 18
 Rivers of.....IV 28
 Steel corporation (see steel cor-
 poration, United States).....
 Supremacy of, in production
 and communication.....IV 37
 Topography of.....IV 24
 Town sites of.....IV 29
 Treaties, as party to.....II 208
 Wilson, Justice, opinion of, on
 union.....II 64
 World power, evolution into a.....II 127
 Universities.....
 American, (E. H. Warfield).....I 186
 Foundations, early.....I 187
 Ideals, (E. G. Hirsch).....I 197
 Traditions, influence of.....I 198
 Caste, breeders of.....I 240
 Development of buildings.....I 191
 Elective systems of.....I 193
 Environment.....I 228
 Expansion of Harvard and Yale.....I 190
 Princeton, Pennsylvania and
 Columbia.....I 190
 Extension.....I 195
 Needs of.....I 205
 Foreign influence, freedom of,
 from.....I 200
 Free education and.....I 189
 Future of, in U. S.....I 200
 German influence on.....I 188
 Growth of.....I 186
 Home, influence on.....I 226
 Idea, the.....I 177
 Industry, and.....III 319
 Migration of students.....I 178
 Museums, deficient in.....I 200
 Originality of American.....I 197
 Popularizing knowledge by.....I 204
 Practical needs, fill.....I 192
 Professional schools and.....I 176, 189, 194
 Relations of, general.....I 192
 Research encouraged.....I 194
 In American.....I 202
 Roman Catholic, (J. F. Mul-
 laney).....I 207
 Scholarship, American, and.....I 200
 Scientific development of.....I 191

Universities—Continued.

- Social aspirations and.....I 188
 Question and.....I 206
 Specialization in teaching.....I 193
 State, anti-Christian.....I 179
 State, vs. small college.....I 178
 Types, early, in U. S.....I 180
 Various American.....I 197
 Training for business men,
 (S. N. Patten).....I 218
 Virginia, of, curriculum of.....VII 298
 Weakness of American.....I 196
 Working classes, not sought
 by.....I 245
 (See also architecture, colleges,
 education).....
 University extension (see universities)
 University of California.....
 Architecture of.....I 274
 University, the Catholic.....
 (See the Catholic university).....
 University of Chicago.....
 Astronomy.....VII 81
 Extension and.....I 195
 University of Michigan.....
 Technical school.....VII 302
 University of New York.....
 Architecture of.....I 274
 University of Pennsylvania.....
 Medicine and.....VII 407
 Upton, Emory.....
 American military policy.....IX 116
 Uranium.....VI 181
 Utah.....
 Territory formed.....II 285
 Utahite.....VI 337
 Utopia.....
 Lawyers in.....II 95

V

- Vall, Alfred.....
 Inventor of telegraph.....VII 119
 Merits of.....VII 123
 Various devices of.....VII 120
 (See also telegraphs).....
 Vall, Stephen.....
 Telegraph line, first.....IV 406
 Telegraphs, early, days of the
 first.....IV 460
 Van (for all Dutch names beginning
 with Van see the patronymics)
 Vandium.....VI 181
 Vandergrift and Foreman (see Stand-
 ard oil).....
 Vanderlip, Frank A.....
 The industrial and financial
 future of U. S.....III 475
 Varley, Cromwell.....
 Inventor of telephones.....VII 175
 Vegetables.....
 Area and production.....V 7

- Vehicles.....
 Statistics of, trusts.....III 164
 Venetian red.....VI 321
 Venezuela.....
 Blockade, proposed, of, for debt.....II 186
 Boundary dispute.....II 182
 Lawyers in, dispute.....II 105
 Vermilion.....VI 292
 Vesuvius, U. S. S.....IX 293
 Veto, limitation of.....II 72
 Vicksburg.....
 Battle of.....IX 54-5
 Cruiser.....IX 301
 (See also war, the Civil).....
 Virginia.....
 Colonies, declaration of freedom
 of.....II 1
 Cruiser.....IX 302
 Lawyers forbidden fees in.....II 95
 Settlement of western.....III 12
 University of (see University of
 Virginia).....
 Vlacaya, the.....
 Spanish war, in.....IX 249
 Volta.....VII 26
 Von (for all names beginning with
 von see the patronymics).....
 Vosberg-Rekow, Dr.....
 Manufactures, American.....IV 58

W

- Wages.....
 American, highest.....VIII 267
 Workmen's.....VIII 11
 Bank deposits of.....III 96
 Basis of.....VIII 277
 Cause of high, in U. S., (A. M.
 Low).....VIII 262
 Cheap labor not best.....VIII 265
 Competition and.....VIII 269-70
 Conditions of service.....VIII 280
 Consolidation of, capital, and.....III 96
 Contract system.....VIII 283
 Basis of.....VIII 288
 Objections to.....VIII 285
 Co-operation.....VIII 308
 Co-operative concerns.....VIII 311
 System.....VIII 285
 Cost of living and.....VIII 263
 Deficiencies of, system.....VIII 307
 Dolge's scheme.....VIII 292
 Education needed.....VIII 289
 Employees, amenities to.....VIII 296-7
 Employers' responsibilities.....VIII 298
 European and American.....III 96
 Comparative, of American.....III 5
 Evolution and.....VIII 312
 Farm labor, of.....V 100
 Fluctuations of.....VIII 279
 High, in U. S., cause of.....VIII 262

Wages—Continued.

- Increase of, and invention.....VII 274
 Industrial commission on.....VIII 30
 Individuality of workmen.....VIII 328
 Living standard in U. S.....VIII 264
 Low, and world's markets.....VIII 416
 Machinery and.....VIII 270
 Menace to premium system.....VIII 299
 New Zealand solution.....VIII 290
 Open shops and.....VIII 211
 Organization, dependent on industrial.....III 95
 Piece work.....VIII 283, 293
 Power, motive, and.....VII 233
 Premium system of, (A. E. Outerbridge).....VIII 291
 Premiums suggested.....VIII 293
 Prices and.....VIII 269
 Problems of.....VIII 302
 Production, cost high, and.....VIII 300
 Machinery and.....VIII 268
 Product sharing.....VIII 306
 Profit sharing and co-operation, (N. P. Gilman).....VIII 302
 Profit sharing.....VIII 292
 Protection and.....VIII 263
 Railroad.....IV 327
 Railroads in China and Japan, and.....VIII 412
 Responsibility of labor.....VIII 281
 Rights of workmen.....VIII 281
 Self-interest and.....VIII 304
 Shirking and.....VIII 291
 Skilled labor, (J. Richards).....VIII 275
 And.....VIII 266
 Statistics, early.....VIII 276
 Systems, three of.....VIII 316
 Various.....VIII 308
 Taylor premium system.....VIII 294
 Time work system.....VIII 280
 Transportation, cost of, and.....VIII 409
 And statistics of.....VIII 414
 Unionism just.....VIII 307
 Workmen and, character of American.....II 252
 Waldron, George B.....
 Railroad operation, statistics of.....IV 228
 Walker, Francis A.....
 Race suicide.....X 214
 Technical education.....VII 314
 Walker, Guy Morrison.....
 American labor's debt to railroads.....VIII 408
 Walker, Robert J.....
 Tariff bill of.....II 325
 Wall street (see finance, speculation, trusts, money, industry, capital, railroads)
 Wallace, D. D.....
 Southern agriculture.....V 373

- Wallace, John Findley.....
 Panama canal, engineering problems of.....IV 179
 Waltons.....
 Burbank's.....VIII 107
 Production.....V 259
 Walsh, William S.....
 American literature.....I 349
 Waltham.....
 Watch industry.....VII 352
 War, the Civil.....
 Agreements, power of officers to make.....II 224
 Army in, (C. A. Partridge).....IX 51
 Achievements of.....IX 57
 At end of.....IX 54
 State of, at beginning of.....IX 52
 Bull Run, first battle of.....IX 53
 Character of men in.....IX 63
 Compared with other wars.....IX 62
 Conditions on both sides.....IX 54
 Cotton, and.....V 108
 Glory not a factor in American wars.....IX 122
 Grant made general.....IX 55
 Campaigns.....IX 54
 Industry, its effects on.....III 371
 Length of American.....IX 117
 Merrimac and Monitor.....IX 259
 Military policy of U. S.....IX 118
 Navy in.....IX 183
 Old American sea fights, (H. H. Boyesen).....IX 263
 Resources of U. S.....IX 126
 Rewarding military heroes.....IX 119
 Sherman's march.....IX 55
 Swords, historic, (R. L. Geare).....IX 392
 Vicksburg, battle of.....IX 55
 Virginia invaded.....IX 52
 Weakness, cause of American.....IX 124
 West Indies, strategic value of.....IX 403
 (See also army, the, West Point, guard, national)
 War (of 1812).....
 Accounts of, various.....IX 221
 British invasion.....IX 33
 Naval strength.....IX 218
 Canada, reinvasion of.....IX 26
 Canadian campaign.....IX 31
 Causes leading to.....IX 29
 Chesapeake-Shannon action.....IX 236
 Complexities of.....IX 25
 Constitution and the Guerriere, sea fight of the.....IX 224-5
 Constitution-Java fight.....IX 233
 Detroit, defeat at.....IX 32
 English and American naval methods.....IX 229
 Equipment of ships.....IX 227
 Eustis, Wm., and.....IX 23

War (of 1812)—Continued.

Finances of.....	IX	28
Gunboat system abolished.....	IX	215
Hornet-Peacock action.....	IX	235
Jefferson's policy of embargo.....	IX	213
Lundy's Lane.....	IX	33
Napoleon and.....	IX	30
National guard in.....	IX	138
Naval campaign of.....	IX	212
Cruise of, first.....	IX	222
In 1809.....	IX	215
Navy in.....	IX	188, 266
State of, in.....	IX	212
Victories of.....	IX	34
New Orleans, battle of.....	IX	36
Of 1812 (F. W. Shepardon).....	IX	26
Results of.....	IX	37-8
Sea fights, first.....	IX	223
Strength of navy.....	IX	217
Toronto captured.....	IX	33
Tripoli, engagement at.....	IX	214
United States-Macedonian sea fight.....	IX	231
U. S. not prepared for.....	IX	27
Washington, fall of.....	IX	34
Wasp-Frolic action.....	IX	229
War, Mexican.....	II	281
Alamo, fall of.....	IX	42
American soldiers in.....	IX	44
Buena Vista, battle of.....	IX	49
Buffalo bayou, battle of.....	IX	44
Causes leading to.....	IX	39
Cerro Gordo, battle of.....	IX	49
Colorado river, battle of.....	IX	43
Conception, battle of.....	IX	41
Contreras and Cherubusco taken.....	IX	50
Declaration of.....	IX	40
Gonzales, battle of.....	IX	41
Losses, American.....	IX	50
Mexico, city of, falls.....	IX	50
Monterey, battle of.....	IX	47
National guard in.....	IX	138
Provisional government.....	IX	41
Race trouble and.....	IX	40
Rio Grande campaign.....	IX	46
San Felipe, convention of.....	IX	41
Scott's invasion of Mexico.....	IX	49
March to Mexico city.....	IX	49
Territory won by.....	IX	50
Texas, independence of.....	IX	42
Recognized.....	IX	44
The army in, (Charles M. Har- vey).....	IX	39
Vera Cruz invested.....	IX	49
War, the Spanish.....		
American sailors' courage in.....	IX	250
Army, the, in, (J. E. Stuart).....	IX	61
State of, before.....	IX	67
Causes of.....	IX	65
Cuba, first soldiers in.....	IX	68

War, the Spanish—Continued.

First plans in.....	IX	69
Foreign policy, effect of, on Amer- ican.....	II	214
Hobson's feat.....	IX	249
Lessons of.....	IX	90
Manila bay attack.....	IX	242
Men in, character of.....	IX	248
Monitors not effectual.....	IX	248
Monroe doctrine.....	II	124
Naval cadets, valor.....	IX	250
Preparations for.....	IX	240
Problems of.....	IX	242
Navy in.....	IX	239
Philippine islands and.....	IX	79
Porto Rican campaign.....	IX	71
Protocol in.....	II	224
Rapid-fire guns in.....	IX	240
Results of.....	IX	72
San Juan hill, battle of.....	IX	70
Santiago de Cuba bay, battle of.....	IX	242
Shafter's campaign.....	IX	69
Spaniards, deficiency of.....	IX	246
Torpedos not tested.....	IX	247
The Army since, (C. E. Hamp- ton).....	IX	69
Vizcaya's conduct.....	IX	249
War college, naval.....	IX	368
(See also naval academy).....		
Ward, Nathaniel, author.....	I	350
Ward, Lester F., sociologist.....	VII	97
Ware, John, physician.....	VII	427
Warfield, E. D.....		
American universities.....	I	186
Warren, James.....	II	17
Warren, John Collins, surgeon.....	VII	430
Warren, William.....	I	316
Washburne, Walter A.....		
Hotels in U. S.....	I	298
Washington, Booker T.....		
Future of the negro.....	VIII	401
Washington, George.....		
Faith of, in federal powers.....	II	69
Foreign alliances.....	II	141
General, a second time.....	IX	3
Moral character of.....	I	243
Peace.....	II	155
Presides at Constitutional con- vention.....	II	60
Storey's opinion on apporportion- ment bill, veto of.....	II	64
Text of veto of apporportionment bill.....	II	61
Veto of, in second apporportion- ment.....	II	49
Washington, city of.....		
Best governed city on con- tinent.....	II	119
Washington, state.....		
Cruiser.....	IX	303

- Washington, state—Continued
 Industries of.....III 366
 Railroads, helped by.....IV 212
 Territory formed.....II 286
 Washington and Lee university.....VII 303
 Watches.....
 (W. A. Countryman).....VII 351
 Cheap watches.....VII 360
 Cheapness of American.....VII 352
 Dennison's, A. L., work.....VII 354
 History, early.....VII 350
 Imports and exports.....VII 362
 Improvement in manufacture
 of.....VII 356
 Logan hair springs.....VII 358
 Machine made, superiority of.....VII 352
 Making a watch.....VII 358
 Nashua industry.....VII 356
 Plant in U. S., first.....VII 353
 Progress of invention in.....VII 356
 Revolution in, making, (W. A.
 Countryman).....VII 351
 Swiss, origin of.....VII 351
 Tariff.....II 343
 Water.....
 Power, as.....VII 217
 Tenement houses and.....X 199
 (See also power, motive).....
 Water power.....
 In falls.....III 348
 New England.....III 349
 Waters, Theodore.....
 Weather bureau, work of.....VII 390
 Watkins, J. L., future demand for
 cotton.....V 135
 Watson, John, surgeon.....VII 432
 Waves.....
 Motor power, as.....VII 258
 Way, Nicholas, physician.....VII 407
 Wayne, Anthony, soldier.....IX 3
 Wealth.....
 American, (W. C. Dodge).....VII 269
 Cotton gin, effect of.....VII 272
 Gain in American, annual.....VII 272
 Weapons (see guns).....
 Weather bureau.....
 (T. Waters).....V 390
 Charts.....VII 396
 Forecasting.....VII 393
 Lightning, statistics of.....VII 399
 Recording the weather.....VII 391
 Storms.....VII 397
 Avoiding.....VII 400
 Tornado statistics.....VII 397
 Work of, (Theodore Waters).....VII 390
 Weavers.....
 Conditions of.....VIII 18
 Webb, William H., shipbuilder.....IX 327
 Webster, Ambrose, inventor.....VII 356
 Webster, Daniel.....
 Capital in U. S., estimate of
 foreign.....III 33
 Dartmouth college case.....II 102
 Education.....I 86, 96
 Hamilton, A.....III 402
 Weights and measures.....
 U. S., in.....VII 46
 Wells, Horace.....VII 42
 Wells, H., dentist.....VII 437
 Laughing gas, applied.....VII 415
 West, the.....
 Agricultural resources of.....VI 222
 California, industries of.....III 368
 Capital in, early demand for.....III 23
 Early Eastern.....III 25
 Commerce and industries of,
 (L. M. Shaw).....III 363
 Commercial, early.....III 16
 Definition of.....III 363
 Farm areas in.....III 364
 Food products of.....III 366
 Future of.....III 368
 Gold resources of.....VI 215
 Industrial growth of early.....III 19
 Industries of Colorado and
 Montana.....III 367
 Of Michigan, Wisconsin, and
 Minnesota.....III 367
 Of Washington state.....III 366
 Irrigation of.....V 344
 Manufactures of.....III 367
 Opening of, first.....III 11
 General effect of.....III 23
 Packing in.....III 366
 Population, increase of.....III 364
 Railroad for, ideal.....VI 223
 Reclamation of, (F. H. Newell).....V 343
 Washington state, industries of.....III 366
 (See also commerce, industry,
 trade).....
 West Indies.....
 Cotton growing, early.....V 140
 Indigenous to.....V 107
 Early naval war, in.....IX 408
 Strategic value of.....IX 403
 Strategic value of, Mahan, A. T.,
 on.....IX 406
 Tropic agriculture and.....VII 44
 West Point.....
 (C. W. Larned).....IX 187
 Aims of.....IX 177
 Barbarism of.....IX 181
 Candidates for.....IX 178
 Centennial of.....IX 170
 Character, maker of.....IX 179
 Of the West Pointer.....IX 189
 Civil war.....IX 174
 Curriculum of.....IX 183
 Graduates, fate of.....IX 175
 In war.....IX 173

- West Point—Graduates, Continued.
 Occupations of.....IX 171
 Money spent on.....IX 172
 Raison d'être of military schools.....IX 167
 Scientific center, as early.....VII 57
 Spanish war.....IX 176
 Technical education at.....VII 287, 299
 (See also military academy, war, army, guard, national).....
- West Virginia.....
 Admitted.....III 373
 Battleship.....IX 302
- Western, Lucile.....I 309
- Westinghouse, George.....
 Brake, invented.....IV 392
 Turbine engines.....VII 254
 (See also railway cars).....
- Weston, Edward, electrician.....VII 138
- Wadsworth, John, physician.....VII 403
- Wheat.....
 American, lands.....IV 31
 Area and production.....V 5
 Best, grown in U. S.....V 147
 Commerce, world's, influence on.....V 156
 Corners in.....V 156
 Crop moving, effects of.....V 152
 First American.....V 21
 Crops, relative value of.....V 13
 World's.....V 147
 Duluth, shipments at.....V 157
 Elevator system, Minneapolis.....V 152
 Elevators.....V 151
 Work of.....V 154
 European trade in.....IV 40
 Exports.....V 31
 Farm laborers, character of.....V 150
 Grain elevators description of.....IV 163
 Leiter deal.....V 156
 McCormick, industry's debt to.....V 149
 Machinery in, growing.....V 150
 Requirements in.....V 150
 Marketing of, a science.....V 151
 Minneapolis, receipt of, in.....V 153
 Minnesota, priority of.....V 148
 Northwest, pioneer growers in.....V 148
 Vast farms of.....V 148
 Pit, (W. R. Lawson).....III 377
 Preparing and planting.....V 149
 Prices, range of.....V 103
 Production.....V 30
 Railroads, builds.....V 152
 Russia second in production.....V 147
 Sold on farms.....V 154
 Speculation in.....V 153
 Thrashing.....V 151
 The mighty river of, (Rollin E. Smith).....V 147
- Wheaton, Henry.....
 Isthmian canal.....II 232
- Wheatstone system (see telegraphs).....
- Wheeler, Cyrenus.....
 Cutter of.....V 96
 Reaper of.....V 86
- Wheeling, cruiser.....IX 301
- Whetstones (see abrasive materials).....
- Whipple, Abraham.....IX 264
 Naval officer.....IX 207
- Whipple, William.....II 17
- Whisky.....
 Adulterated.....X 298
- White, Henry.....
 Machinery and labor.....VIII 365
- Whitecaps.....X 135
- Whiting.....VI 323
- Whitman, Walt.....I 357, 361
- Whitney, Eli.....
 Invention of.....V 109
- Whitney, William C.....
 Naval secretary.....IX 293
- Whittier, John G.....I 363
- Whittelsey, Sarah S.....
 Factory legislation and inspection in U. S.....VIII 70
- Wiggins, Twing B.....
 Medicine in America.....VII 402
- Wilcox, Walter F.....
 Race suicide in U. S.....X 270
- Wiley, H. W.....
 Starch.....V 166
 The U. S. soils and their products.....V 1
- Wilkins, Mary E.....I 365
- Willey, Day Allen.....
 Drama of furnace, forge and shop.....III 264
 Modern grain elevators.....IV 163
- Williams, Gardner, mining engineer.....VI 26
- Willoughby, William Franklin.....
 Integration of industry in U. S.....III 63
- Wilkinson, James, soldier.....IX 3
- Wilson, Supreme Justice.....II 64
 Union, opinion on the.....II 64
- Wilson, Allen B.....
 Sewing machine, inventor of.....VII 344
- Wilson, Henry.....
 Naval war college.....IX 366
- Wilson, James.....
 American farmer of to-day.....V 12
 Debate of, on colonial freedom.....II 13
 Department of agriculture.....V 403
- Wilmington, gunboat.....IX 300
- Winans, Ross.....
 Car builder, early.....IV 391
- Wine.....
 American, (J. H. Garber).....V 267
 First.....V 269
 First successful.....V 270
 California, association, product of.....V 263
 Early.....V 272
 Growth of.....V 272
 Improvements.....V 274
 Industry.....V 262

Wine—California. Continued.

- ProductionV 261
 Of 1860.....V 274
 Catawba.....V 270
 Industry, growth of.....V 271
 Champagne.....V 275
 Character of.....V 274
 European vines imported to
 California.....V 273
 Grapes, early American.....V 268
 History, early.....V 267
 Ohio production, early.....V 271
 Production and value in 1860.....V 271
 In 1880.....V 271
 In 1890.....V 272
 In 1900.....V 272
 Production, California.....V 261
 In U. S.....V 254
 Red.....V 275
 Stanford wineries.....V 262
 Statistics, early American.....V 260-70
 Early California.....V 273
 Sweet.....V 275
 (See also grapes)
 Winslow, Edward, author.....I 350
 Winslow (gunboat).....IX 300
 Winthrop, John, author.....I 350
 Wire (see iron)
 Wisconsin, battleship.....IX 301
 Witte, M. de, railroad man.....IV 207
 Woerd, C. V., inventor.....VII 356
 Wolcott, Oliver.....
 Colonies, part of, in freeing.....II 12
 Wolfe, Mrs. Catharine Lorillard,
 philanthropist.....X 221
 Wolsley, Lord.....
 American army.....IX 180
 Woman, the American.....
 (Hugo Munsterberg).....I 402
 Woman.....
 American and German.....I 404
 Celibacy and.....I 416
 Changes in condition of.....VIII 377
 Coeducation and.....I 410
 College, and marriage.....I 411
 Earnings of.....VIII 382
 Educated.....I 409
 Education menaced by.....I 422
 Educational dominance of.....I 425
 Equal of man.....I 419
 Equality of, makes inequality.....I 424
 Factories, advent of, in.....VIII 378
 Family, the, and.....I 406
 Interest and.....I 417
 Fascination of American.....I 403
 Forwardness of American.....I 406
 Freedom of American.....I 412
 Function of.....I 406
 German and American housewife.....I 13
 German efforts to elevate.....I 504
 Industry and.....VIII 384

Woman—Continued.

- Higher education and.....I 407
 History of, early in labor.....VIII 375
 Household and.....I 413
 Ideals of.....I 415
 Industrial importance of.....VIII 380
 Intellect of.....I 420
 Knights of Labor and.....VIII 384
 Labor, place of, in.....VIII 375
 Organizations, place of, in,
 (Sophie Yudelsohn).....VIII 375
 Present status in.....VIII 376
 Laborer.....I 414
 Marriage and.....I 409
 Material growth and.....I 425
 Nervousness of American.....I 415
 Originality, has no.....I 126
 Percentage of, in industry.....VIII 382
 Politics.....I 417
 Professions and.....I 423
 Psychic.....I 420
 Public life for.....I 418
 Wealth.....I 408
 Science and.....I 421
 Sphere of.....VIII 377
 Social system and.....I 416
 Socialism and.....I 406
 Superiority of, to man.....I 410
 Trades, in various.....VIII 381
 Universities and.....I 421
 Wage earner.....I 407
 Wages of.....VIII 378
 Weakness of, mental.....I 422
 (See also home, the)
 Women.....
 American, in philanthropy, (May
 Wilkinson Mount).....X 218
 Gould, Helen.....X 219
 Jewish, employment for.....X 67
 Ladies church union.....X 219
 Percentage of, in Germany.....I 408
 Race suicide and.....X 208
 Woman's Exchange.....X 220
 Young, Christian association.....X 220
 Wood, James Rushmore.....VII 432
 Wood, Leonard.....
 Governor of Moro.....IX 83
 Wood, Walter A.....V 92
 Wood (see also lumber)
 Woodbury, Commissioner.....
 Microbes.....II 104
 Woodruff, Clinton Rogers.....
 Municipal merit system.....II 428
 Woods, Robert A.....
 Educational philanthropy.....X 50
 Philanthropy in education.....I 264
 Woodward, Calvin M., educator.....VIII 422
 Woodward, J. J., physician.....VII 420
 Wool.....
 Consumption, cotton, and.....V 138
 Decline of.....V 137

- Wool—Continued.
 Exports.....V 32
 Production, American and
 world's, compared....III 2
 Worden, J. L., naval officer.....IX 259
 Workmen.....
 Ages of.....VIII 19
 American, (Thomas L. Kidd)....VIII 1
 Shops.....VIII 19
 Superiority of.....VIII 2
 Bricklayers.....VIII 20
 British boss, stupidity of.....VIII 9
 Child labor.....VIII 15
 Class apart, a.....I 245
 Cotton spinners.....VIII 17
 Cutlery, in.....VIII 15
 English and American.....VIII 2
 Foreign, not degenerate.....VIII 7
 Home life and clubs.....VIII 30
 How labor unions benefit the
 workingman, (F. F. Ingram),VIII 172
 Incentive to American.....VIII 358
 Leather workers.....VIII 20
 Machine shops, conditions of...VIII 357
 Machinery and.....VIII 2
 Moseley commission.....VIII 4
 Plasterers.....VIII 21
 Rights of.....VIII 279
 Sanitation.....VIII 19
 In shops.....VIII 14
 Speed of.....VIII 6
 Spirit of, in U. S.....VIII 357
 Strikes, American...VIII 16
 Tailors.....VIII 18
 Wages of American.....VIII 11
 Weavers.....VIII 18
 (See also labor, trades-unions,
 wages).....
 Wotten, Thomas, physician.....VII 402
 Wright, Carroll D.....
 Factory as an element in social
 life.....VIII 338
 Wright, Luke E.....
 The army in the Philippines.....IX 74
 What U. S. has done for the
 Philippines.....II 289
 Wyck Van, Mayor.....
 Subway, N. Y., turned earth for...IV 457
 Wynne, Thomas, physician.....VII 404
 Wyoming.....
 Territory formed.....II 275
 Wythe, George.....
 Colonies, part of, in freeing.....II 12
- ## Y
- Yale university.....
 Expansion of.....I 190
 Sheffield school.....VII 319
 Yeast.....
 Government experiments.....VII 44
 Yellow fever.....
 Relief for Cuba.....II 304
 Yorktown.....
 Siege of.....IX 21
 U. S. gunboat.....IX 292
 Yudelson, Sophie.....
 Woman's place in labor.....VIII 375
 Young, McClintock.....
 Patents of.....V 88
- ## Z
- Zenger, Peter.....
 Famous libel case of.....II 98
 Zinc.....
 Development of, mines.....VI 281
 History of, in U. S.....VI 277
 Lead and, ore, (I. A. Hourwich)..VI 273
 Mining and handling of.....VI 279
 Zoology.....
 American.....VII 17

This book should be returned to
the Library on or before the last date
stamped below.

A fine is incurred by retaining it
beyond the specified time.

Please return promptly.



Widener Library



3 2044 097 893 168